St. Aloysius College (Autonomous) Jabalpur

B.Com. I & II Semester

Business and Vedic Maths

Question Bank

Unit- I

MCQ

Choose the correct option of following

Ratio

1) The ratio between the price of two cows costing 1500 Rs and 1000Rs is .....

a)3:1 b)3:2

c)3:4 d)4:3 Answer:b

2) If x:y =3:4, then the value of (4x-y):(2x+3y) is =?

a)4:9 b)8:9

c)4:3 d)8:3 Ans.:a

3)The ratio between 1m and 1 km is.....

a)1:0.001 b)1:0. 0001

c)1:100 d)1:1000 Ans.:d

4)Which one of the ratio is smaller?

a)3:4 b)5:6

c)7:8 d)17:15 Ans.:a

5)Two amounts have the ratio of 4:3. If the first one is worth 28 Rs, find the other one?

a)12 b)21

c)4 d)3 Ans.:a

6)Two numbers x and y are in the ratio of 5:7 and there sum is 36. Then x is .....

a)12 b)15

c)18 d)19 Ans.:b

7) Two whole numbers whose sum is 64, can not be in the ratio of ...

a)5:3 b)7:1

c)3:4 d)9:7 Ans .:c

8)Gaining ratio is used .....

a)at the time of admission of a partner

b)atb the time of retirement of partner

c)in case of both a) and b)

d)neither in case of a) nor in case of b) Ans.:b

9)X, Y and Z share profit and losses in the ratio of ½ ,1/3 and 1/6 respectively. Z retires . the gaining ratio is .....

a)2:1 b)1:2

c)3:2 d)2:3 Ans.:a

10) Gaurab and Ishan divide profit in the ratio of 4:5. If the profit is 9000 Rs then Gaurav's share is

a)5000 b)7000

c)4000 d)2000 Ans.:c

11)A and B are partners sharing profit s in the ratio of 4:3. C is admitted as a partner . The new profit sharing ratio is 3:2:1. The sacrificing ratio is .....

a)3:4 b)2:3
c)4:3 d)3:2 Ans.:a

12)Sacrificing ratio is =?
a) new profit loss ratio – old profit loss ratio
b) old profit loss ratio – new profit loss ratio
c)both a and b
d)none of the above Ans.:b

13) If a and b are in the ratio of 3:4 and b and c in the ratio of 12:13, then a and c will be in the ratio of .....
a)3:13 b)13:9
c)36:13 d)9:13 Ans.:d

14)Minor partner is only laible to .....
a) profit b)loss
c)both a and b d)none of these Ans.:a

15) The ratio between a and b is 3:5 and between b and c is 2:3. Then a:b:c will be.....
a)6:10:18 b)6:12:15
c)6:10:15 d)6:12:18 Ans.:c

16)The sum of two numbers is 40 and there difference is 4. The ratio of two numbers is .....
a)21:19 b)22:9
c)11:9 d)11:18 Ans.:c

17)In a class of 75 students 15 have failed . The ratio of passed and failed student is
a)1:4 b)4:1
c)1:5 d)5:1 Ans.:b

18) Dividing 1296Rs between a and b in the ratio of 1/3 :1/5, is share will be
a)760Rs b)456 Rs
c)976Rs d)850 Rs Ans .:a

19)Two natural numbers are in the ratio of 3:5 and the product is 2160. The smaller of the numbers is.....
a)12 b)18
c)24 d)36 Ans.d

20)IF a:b=2:3 and b:c=5:6,then the value of a:b:c is.....
a)10:18:15 b)10:15:18
c)15:10:8 d)18:15:10 Ans.b

21)Sacrificing ratio is used .....
a)at time of the admission of the partner
b)at the time of the retirement of the partner
c)in case of both a and b
d)neither in case of a nor in case of b Ans.a 22) Two amount have the ratio 8:9. If the first one is 24,the other is .....
a) 27 b)9
c)7 d)63 Ans.a

23)In a class of 42 students, 6 students are girls. The ratio of boys and girls in class is.....
a)7:1 b)7:6
c)6:7 d)6:1 Ans.d

24)The ratio of pass and fail studentsis 9:2. IF20 students fail, number of pass student is .....
a)180 b)220
c)110 d)90 Ans.d

25)Divide 560Rs between a and b in such a way that there share are in the ratio of 3:5

a)A's share = 210,B's share = 350
b)A's share =400,B's share= 160
c)A's share=230,B's share= 330
d)None of these

Ans.a

आनुपात

1) **1500** और **1000R** की लागत वाली दो गायों की कीमत के बीच का अनुपात ..... है।

a)3:1 **b)3:2**
c)3:4 **d)4:3**

Answer:b

2) यदि **x: y = 3: 4,** तो **(4x-y)** का मान :(**2x + 3y) =** है**?**

a)4:9 **b)8:9**
c)4:3 **d)8:3**

Ans.:a

3)1 मी और **1** किमी के बीच का अनुपात ..... है।

a)1:0.001 **b)1:0. 0001**
c)1:100 **d)1:1000**

Ans.:d

4)कौन सा अनुपात छोटा है**?**

a)3:4 **b)5:6**
c)7:8 **d)17:15**

Ans.:a

5)दो राशियों का अनुपात **4: 3** है। यदि पहले एक की कीमत **28** रुपये है**,** तो दूसरे को खोजें**?**

a)12 **b)21**
c)4 **d)3**

Ans.:a

6)दो संख्याएँ **x** और **y 5: 7** के अनुपात में हैं और योग **36** है। तब **x .....** है।

a)12 **b)15**
c)18 **d)19**

Ans.:b

7) दो पूरी संख्या जिनकी राशि **64** है**,** के अनुपात में नहीं हो सकती ...

a)5:3 **b)7:1**
c)3:4 **d)9:7**

Ans .:c

8)प्राप्त अनुपात का उपयोग किया जाता है .....।

a)एक साथी के प्रवेश के समय

b)पार्टनर के रिटायरमेंट के समय

c)दोनों के मामले में) और बी)

d)न तो ए के मामले में और न ही बी के मामले में)

Ans.:b

9)X, Y और **Z** क्रमशः **1, 1/3** और **1/6** के अनुपात में लाभ और हानि साझा करते हैं। **Z** रिटायर हो गए। लाभ अनुपात है .....

a)2:1 **b)1:2**
c)3:2 **d)2:3**
Ans.:a

10) गौरब और इशान लाभ को **4: 5** के अनुपात में विभाजित करते हैं। यदि लाभ **9000** रु है तो गौरव का हिस्सा है

a)5000 **b)7000**
c)4000 **d)2000**
Ans.:c

11)A और **B 4: 3** के अनुपात में लाभ साझा करने वाले साझेदार हैं। सी को भागीदार के रूप में भर्ती किया जाता है। नया लाभ साझा करने का अनुपात **3: 2: 1** है। त्याग का अनुपात है .....

a)3:4 **b)2:3**
c)4:3 **d)3:2**
Ans.:a

12)बलि का अनुपात = है**?**

a) new profit loss ratio – old profit loss ratio
b) old profit loss ratio – new profit loss ratio
c)both a and b
d)none of the above
Ans.:b

13) यदि **a** और **b 12:13** के अनुपात में **3: 4** और **b** और **c** के अनुपात में हैं**,** तो **a** और **c .....** के अनुपात में होंगे।

a)3:13 **b)13:9**
c)36:13 **d)9:13**
Ans.:d

14)मामूली साथी ही उत्तरदायी होता है .....

a) profit **b)loss**
c)both a and b **d)none of these**
Ans.:a

15) A और **b** के बीच का अनुपात **3: 5** है और **b** और **c** के बीच का अनुपात **2: 3** है। तब **a: b: c** होगा**…**।..

a)6:10:18 **b)6:12:15**
c)6:10:15 **d)6:12:18**
Ans.:c

16)दो संख्याओं का योग **40** है और अंतर **4** है। दो संख्याओं का अनुपात है .....

a)21:19 **b)22:9**
c)11:9 **d)11:18**
Ans.:c

17)75 छात्रों की एक कक्षा में **15** असफल रहे हैं। उत्तीर्ण और अनुत्तीर्ण छात्र का अनुपात है

a)1:4 **b)4:1**
c)1:5 **d)5:1**
Ans.:b

18) 1/3: 1/5 के अनुपात में **a** और **b** के बीच **1296Rs** का विभाजन**,** हिस्सा होगा

a)760Rs **b)456 Rs**
c)976Rs **d)850 Rs**
Ans .:a

19)दो प्राकृतिक संख्याएँ **3: 5** के अनुपात में हैं और उत्पाद **2160** है। संख्याओं का छोटा है .....

a)12 **b)18**

c)24 **d)36**

Ans.d

20)यदि **a: b = 2: 3** और **b: c = 5: 6** है, तो **a: b: c** का मूल्य ..... है।

a)10:18:15 **b)10:15:18**

c)15:10:8 **d)18:15:10**

Ans.b

21)बलिदान अनुपात का उपयोग किया जाता है .....

a)साथी के प्रवेश के समय

b)साथी की सेवानिवृत्ति के समय

c)ए और बी दोनों का मामला

d)न तो बी के मामले में और न ही बी के मामले में

Ans.a

22) दो राशियों का अनुपात **8: 9** है। यदि पहला **24** है, तो दूसरा है .....

a) 27 **b)9**

c)7 **d)63**

24)पास और फेल छात्रों का अनुपात **9: 2** है। **IF20** छात्र फेल, पास छात्र की संख्या .....

a)180 **b)220**

c)110 **d)90**

Ans.d

25)560Rs को **a** और **b** के बीच इस तरह विभाजित करें कि शेयर **3: 5** के अनुपात में हों

a)A's share = 210,B's share = 350

b)A's share =400,B's share= 160

c)A's share=230,B's share= 330

d)None of these

Ans.a

PROPORTION

Multiple choice questions

1. What is 4th proportional in 9,13 and 153?

(a)251 **(c)175**

(b)181 **(d)221**

[Ans. (d)]

2. The 3rd proportional to 18 and 54 is?

(a)144 **(c)162**

(b)72 **(d)972**

[Ans. (c)]

3. If a:b::3:5,b:c::4:3 and c:d::4:5,a:d=?

(a)4:5 **(c)64:25**

(b)16:25 **(d)64:125**

[Ans. (c)]

4. Shruti purchased several number of three articles P,Q and R in the proportion 3:2:3. If the unit cost of the articles P,Q and R are 200 , Rs.90 and Rs.60 respectively, how many articles of Q must have been purchased in the total purchases of Rs.4800?

(a) 8 (c)12

(b) 10 (d)14

[Ans. (b)]

5. In what ratio should the profit of Rs.8000 be divide if X starts a business with an investment of Rs.15000 after 3 months from the start of the business.

(a)16:2:3 (c)16:2:9

(b)8:3:6 (d)6:9:1

[Ans. (c)]

6. In what ratio should the profit be divided if M,N,O invests capital in ratio 2:3:5 and their timing of their investments are in the ratio 4:5:6.

(a) 8:15:30 (c)4:5:6

(b) 5:18:28 (d)2:3:5

[Ans. (a)]

7. What is the fourth proportional to the numbers 2,5,8.

(a) 40 (c)15

(b) 20 (d)10

[Ans. (b)]

8. The third proportional to x2-y2 , x-y is?

(a) x+y (c) x-y/(x+y)

(b) x-y (d)1

[Ans. (c)]

9. A,B and C distribute Rs.1000 among them. A and C have Rs.400 , B and C Rs.700.How much does C have?

(a) Rs.100 (c) Rs.200

(b) Rs.50 (d) Rs.300

[Ans. (a)]

10. It was intended that Rs.585 be divided among P,Q and R in the ratio of 4:3:2, but by mistake the distribution was made in the proportion of 1/4:1/3:1/2. How much does 'R' gain by the error?

(a) Rs.99 (c) Rs.140

(b) Rs.126 (d) Rs.152

[Ans. (c)]

11. Find A:B:C:D when A:B=2:3; B:C=7:9;C:D=5:7

(a) 70:105:135:189 (c) 70:124:155:201

(b) 105:115:236:189 (d) 12:78:256:189

[Ans. (a)]

12. Find the mean proportional between 7 and 63 ?

(a) 35 (c) 27

(b) 21 (d) 30

[Ans. (b)]

13. 10/13=11/28=21/11=12/11=K. What is K?

(a) 6/7 (c)10/11

(b) 12/13 (d)59/63

[Ans. (a)]

14. A:b=3:7 and B:C=9:5. What is A:B: C ?

(a) 3:15:5 (c) 3:7:5
(b) 21:16:45 (d) 27:63:35
[Ans. (d)]

15. How to divide 3395 in ratio of 42:32:23?
(a) 1470,1120 and 805
(b) 1550,1235 and 610
(c) 1245,1150 and 1000
(d) 1764,1022 and 529
[Ans. (a)]

16. The product of two positive numbers is 4752 and their ratio is 11:12. The smaller of these numbers is
(a) 72 (c) 66
(b) 60 (d) 75
[Ans. (c)]

17. If x:y=3:4, then (7x+3y):(7x-3y) is equal to
(a) 5:2 (c) 11:3
(b) 4:3 (d) 37:19
[Ans. (c)]

18. If a:b=5:7 and c:d=2a:3b, then ac:bd is
(a) 20:38 (c)10:21
(b) 50:147 (d) 50:151
[Ans. (b)]

19. In the proportion 15:66::185:x, the value of x is:
(a) 814 (c) 714
(b) 841 (d) 741
[Ans. (a)]

20. The third proportional 9 and 12 is :
(a) 12 (c) 14
(b) 16 (d) 24
[Ans. (b)]

21. The first proportional to 2.4 and 7.6 is:
(a) 1.6 (c) 1.8
(b) 1.2 (d) 3
[Ans. (a)]

22. The mean proportional of 0.32 and 0.02 is :
(a) 0.05 (c) 0.07
(b) 0.06 (d) 0.08
[Ans. (d)]

23. If 36 men complete a work in 25 days then 15 men will complete it (in days) :
(a) 6 (c) 56
(b) 50 (d) 60
[Ans. (d)]

24. The salary of A, B and C are in continued proportion. If the salary of B and C are respectively Rs.250 and Rs.1250, find the salary of A.
(a) 50 (c) 55
(b) 40 (d) 44
[Ans. (a)]

25. If 3,x,1083 are in the continued ratio, find x :

(a) 47 **(c) 44**
(b) 57 **(d) 34**

[Ans. (b)]

Proportion Hindi

समानुपात

Multiple choice questions

26. **9,13** और **153** में **4** आनुपातिक क्या है?

(a)251 **(c)175**
(b)181 **(d)221**

[Ans. (d)]

27. **18** और **54** के लिए **3** आनुपातिक है?

(a)144 **(c)162**
(b)72 **(d)972**

[Ans. (c)]

28. यदि **a: b :: 3: 5, b: c :: 4: 3** और **c: d :: 4: 5, a: d =?**

(a)4:5 **(c)64:25**
(b)16:25 **(d)64:125**

[Ans. (c)]

29. श्रुति ने **3:** पी**,** क्यू और आर के कई नंबर **3: 2: 3** के अनुपात में खरीदे। यदि लेख **P, Q** और **R** की इकाई लागत क्रमशः **200,** रु **.90** और रु। है**,** तो **Q** के कितने लेख होने चाहिए

(c) 8 **(c)12**
(d) 10 **(d)14**

[Ans. (b)]

30. **X** के कारोबार के शुरू होने के **3** महीने बाद रु। **1,5000** के निवेश के साथ एक व्यवसाय शुरू करने पर **Rs.8000** का लाभ किस अनुपात में विभाजित किया जाना चाहिए।

(a)16:2:3 **(c)16:2:9**
(b)8:3:6 **(d)6:9:1**

[Ans. (c)]

31. यदि **M, N, O** को अनुपात **2: 3: 5** के अनुपात में बांटा गया है और उनके निवेश का समय **4: 5: 6** के अनुपात में है**,** तो किस अनुपात में लाभ को विभाजित किया जाना चाहिए।

(c) 8:15:30 **(c)4:5:6**
(d) 5:18:28 **(d)2:3:5**

[Ans. (a)]

32. **2,5,8** की संख्या के लिए चौथा आनुपातिक क्या है।

(c) 40 **(c)15**
(d) 20 **(d)10**

[Ans. (b)]

33. **X2-y2, x-y** का तीसरा आनुपातिक है?

(c) x+y **(c) x-y/(x+y)**
(d) x-y **(d)1**

[Ans. (c)]

34. **A, B** और **C** उनके बीच **1000** रु वितरित करते हैं। **A** और **C** के पास **Rs.400, B** और **C** के पास **Rs.700**। **C** के पास कितना है**?**

(c) Rs.100 **(c) Rs.200**

(d) Rs.50 **(d) Rs.300**

[Ans. (a)]

35. यह इरादा था कि रु। **585** को **4: 3: 2** के अनुपात में **P, Q** और **R** के बीच विभाजित किया जाए**,** लेकिन गलती से वितरण **1/4: 1/3: 1/2** के अनुपात में हो गया। त्रुटि से **much R** 'को कितना फायदा होता है**?**

(c) Rs.99 **(c) Rs.140**

(d) Rs.126 **(d) Rs.152**

[Ans. (c)]

36. खोजें: **A: B: C: D** जब **A: B = 2: 3;** बी: सी = **7: 9;** सी: डी = **5: 7**

(c) 70:105:135:189 **(c) 70:124:155:201**

(d) 105:115:236:189 **(d) 12:78:256:189**

[Ans. (a)]

37. **7** और **63** के बीच का आनुपातिक अर्थ ज्ञात कीजिए**?**

(c) 35 **(c) 27**

(d) 21 **(d) 30**

[Ans. (b)]

38. **10/13 = 11/28 = 21/11 = 12/11** = कश्मीर। **K** क्या है**?**

(c) 6/7 **(c)10/11**

(d) 12/13 **(d)59/63**

[Ans. (a)]

39. ए: बी = ३:: और बी: सी = ९: ५। **A: B: C** क्या है**?**

(c) 3:15:5 **(c) 3:7:5**

(d) 21:16:45 **(d) 27:63:35**

[Ans. (d)]

40. **42:32:23** के अनुपात में **3395** को कैसे विभाजित करें**?**

(e) 1470,1120 and 805

(f) 1550,1235 and 610

(g) 1245,1150 and 1000

(h) 1764,1022 and 529

[Ans. (a)]

41. दो धनात्मक संख्याओं का गुणनफल **4752** है और उनका अनुपात **11:12** है। इनमें से छोटी संख्या है

(c) 72 **(c) 66**

(d) 60 **(d) 75**

[Ans. (c)]

42. यदि **x: y = 3: 4,** तो **(7x + 3y) :(7x-3y)** बराबर है

(c) 5:2 **(c) 11:3**

(d) 4:3 **(d) 37:19**

[Ans. (c)]

43. यदि **a: b = 5: 7** और **c: d = 2a: 3b,** तो **ac: bd**है

(c) 20:38 **(c)10:21**

(d) 50:147 **(d) 50:151**

[Ans. (b)]

44. **15: 66 :: 185: x** के अनुपात में, **x** का मान है:

(c) 814 **(c) 714**

(d) 841 **(d) 741**

[Ans. (a)]

45. तीसरा आनुपातिक **9** और **12** है:

(c) 12 **(c) 14**

(d) 16 **(d) 24**

[Ans. (b)]

46. **0.32** और **0.02** का औसत आनुपातिक है:

(c) 0.05 **(c) 0.07**

(d) 0.06 **(d) 0.08**

[Ans. (d)]

47. यदि **36** पुरुष **25** दिनों में एक काम पूरा करते हैं तो **15** पुरुष इसे पूरा करेंगे (दिनों में):

(c) 6 **(c) 56**

(d) 50(d) 60

[Ans. (d)]

48. **A,b** और **c**के वेतन निरंतर अनुपात में हैं। यदि **B** और **C** का वेतन क्रमशः रु। **250** और रु। **250** है, तो **A** का वेतन ज्ञात कीजिए।

(c) 50 **(c) 55**

(d) 40 **(d) 44**

[Ans. (a)]

49. यदि **3, x, 1083** निरंतर अनुपात में हैं, तो **x** खोजें:

(c) 47 **(c) 44**

(d) 57 **(d) 34**

[Ans. (b)]

PERCENTAGE

Multiple Choice Type Questions-

1. '4/5 of price' mean:

(a)20% **(b)40%**

(c)60% **(d)80%**

[Ans:(d)]

2. The value of 12 ½% of Rs.500 is:

(a)Rs.60 **(b)Rs.52**

(c)Rs.62 **(d)Rs.62.50**

[Ans:(d)]

3. The population of a place increased from 7,680 to 8,064. The percentage increase is:

(a)4.76% **(b)5%**

(c)7.5% **(d)10%**

[Ans:(B)]

4. What will be the 12% of Rs.1000?

(a)Rs.100 **(b)Rs.120**

(c)Rs.150 **(d)None of these**

[Ans:(b)]

5. If percentage of saving on income is 25, then percentage of saving on expense is:

(a)15% **(b)25%**

(c)66 2/3% **(d)33 1/3%**

[Ans:(d)]

6. The number whose 12 ½% is 175 ½ , will be:

(a)1,404 **(b)1,440**

(c)1,044 **(d)404**

[Ans:(a)]

7. 8 1/3% expressed in fraction is:

(a)25/3 **(b)3/25**

(c)1/12 **(d)1/4**

[Ans:(c)]

8. 'Half of 1%' written as a decimal will be:

(a)0.005 **(b)0.05**

(c)0.02 **(d)0.2**

[Ans:(a)]

9. What percent of 1 kilogram is 5 gram?

(a)0.5 **(b)5**

(c)0.005 **(d)5.5**

[Ans:(a)]

10.What percent of a day is 3 hours?

(a)12.5 **(b)22.5**

(c)12 **(d)12.25**

[Ans:(a)] 11.Adding 33 ½% of number in that number gives

200. 66 2/3% of that number is:

(a)100 **(b)150**

(c)200 **(d)300**

[Ans:(a)]

12. A's income is 20% more than B's income. How much less in B's income than A's income?

(a)20% **(b)83%**

(c) 16 2/3% **(d) 80%**

[Ans:(c)]

13. There are two candidates in an election. The candidate who gots 60% votes, won the election by 5,250 votes. The votes received by the defeated candidate are:

(a) 10,500 **(b) 15,000**

(c) 10,050 **(d) 3,421**

[Ans:(a)]

14. 5 liter of 100% acid is added to 5 liter of 20% acid mixture. The quantity of acid in mixture is:

(a) 50% **(b) 52.2%**

(c) 57.5% **(d) 60%**

[Ans:(d)]

15. The consumption of sugar increased from Rs.112 to Rs.140. The percentage increase in consumption of sugar is:

(a) 25% **(b) 28%**

(c) 20% **(d) None of these**

[Ans:(a)]

16.The number whose 20% is 1/8, is:

(a)0.625 **(b)0.652**

(c)6.25 (d)62.5

[Ans.(c)]

17.The value of 12 ½% of 400:

(a)48 (b)50

(c)70 (d)35

[Ans.(b)]

18.At an election, where are two candidates only, a candidates who get 43% of votes is rejected by a majority of 420 votes. Then total number of votes recorded assuming that there was no void vote are:

(a)2700 (b)2800

(c) 3200 (d)none of these

[Ans.(d)]

19. Evaluate 28% of 450+45% of 280:

(a) 232 (b) 242

(c) 252 (d) 262

[Ans. (c)]

20. The ratio 5:20 expressed as percent equals to:

(a) 50% (b) 125%

(c) 25% (d) none of these

[Ans. (c)]

21. 2.09 can be expressed in terms of percentage as (a) 2.09% (b) 20.9%

(c) 209% (d) 0.029%

[Ans. (c)]

22. What percent is 24 meter of 64 km is:

(a) 0.756 (b) 0.0357

(c) 0.575 (d) 0.0375

[Ans. (d)]

23. The consumption of milk was Rs. 120. It was increased to Rs. 150. What is the percentage increase in consumption?

(a) 35% (b) 25%

(c) 59% (d) 55%

[Ans. (b)]

24. What percent 29 cubic centimeter is of one litre:

(a) 2.0% (b) 4.9%

(c) 2.9% (d) 3.2%

[Ans. (c)]

25. In an examination 80% of candidates passed in English and 85% candidates passed in Mathematics. If 73% candidates passed in both of these subjects, then what per cent of candidates failed in both the subjects?

(a) 8 (b) 15

(c) 27 (d) 35

[Ans:(a)]

प्रतिशत

बहुविकल्पीप्रकारप्रश्न-

1. 1. 4/5 मूल्यकामतलब:

(ए) २०% (बी) ४०%

(c) 60% (d) 80%

[उत्तर: (घ)**]**

2. 500 रुपयेके **12 of%** कामूल्यहै:

(a) Rs.60 (b) Rs.52
(c) Rs.62 (d) Rs.62.50

[उत्तर: (घ)**]**

3. एकजगहकीआबादी **7,680** सेबढ़कर **8,064** होगई।प्रतिशतवृद्धिहै:

(ए) ४.)६% (बी) ५%

(c) 7.5% (d) 10%

[उत्तर: (बी)**]**

4. 1000 रुपयेका **12%** क्याहोगा**?**

(ए) **Rs.100 (b) Rs.120**

(c) Rs.150 (d) इनमेंसेकोईनहीं

[उत्तर: (ख)**]**

5. यदिआयपरबचतकाप्रतिशत **25** है**,** तोव्ययपरबचतकाप्रतिशतहै:

(ए) १५% (बी) २५%

(c) 66 2/3% (d) 33 1/3%

[उत्तर: (घ)**]**

6. जिसकीसंख्या **12 is% 175** ½ होगी**,** वहहोगी:

(a) 1,404 (b) 1,440
(c) 1,044 (d) 404

[उत्तर: (क)**]**

7. 8 1/3% अंशमेंव्यक्तकियागयाहै:

(a) 25/3 (b) 3/25
(c) 1/12 (d) 1/4

[उत्तर: (ग)**]**

8. 'निम्नमेंसेएकदशमलवकेरूपमेंलिखागया **1%:**

(a) 0.005 (b) 0.05
(c) 0.02 (d) 0.2

[उत्तर: (क)**]**

9. 1 ग्रामकाप्रतिशत **5** ग्रामक्याहै**?**

(a) 0.5 (b) 5
(c) 0.005 (d) 5.5

[उत्तर: (क)**]**

10. एकदिनका **3** प्रतिशतक्याहै**?**

(a) 12.5 (b) 22.5
(c) 12 (d) 12.25

[उत्तर: (ए)] ११. ३३% संख्याउससंख्यामेंदेताहै

उससंख्याका **200. 66 2/3%** है:

(a) 100 (b) 150
(c) 200 (d) 300

[उत्तर: (क)]

12. बीकीआयकीतुलनामेंआय **20%** अधिकहै। **A** कीआयसे **B** कीआयमेंकितनाकमहै**?**

(ए) २०% (बी) %३%

(c) 16 2/3% (d) 80%

[उत्तर: (ग)]

13. एकचुनावमेंदोउम्मीदवारहोतेहैं। **60%** वोटपानेवालेउम्मीदवारने **5,250** वोटसेचुनावजीता।पराजितउम्मीदवारद्वाराप्राप्तवोटहैं:

(a) 10,500 (b) 15,000
(c) 10,050 (d) 3,421

[उत्तर: (क)]

14. 5% 100% एसिड **5** लीटर **20%** एसिडमिश्रणमेंजोड़ाजाताहै।मिश्रणमेंअम्लकीमात्राहै:

(ए) ५०% (बी) ५२.२%

(c) 57.5% (d) 60%

[उत्तर: (घ)]

15. चीनीकीखपत **12** रुपयेसेबढ़कर **Rs.140** होगई।चीनीकीखपतमेंप्रतिशतवृद्धिहै:

(ए) २५% (बी) २%%

(c) 20% (d) इनमेंसेकोईनहीं

[उत्तर: (क)]

16. वहसंख्याजिसका **20% 1/8** है:

(a) 0.625 (b) 0.652
(c) 6.25 (d) 62.5

[उत्तर:। (ग)]

17. 400 के **12 ½%** कामूल्य:

(a) 48 (b) 50
(c) 70 (d) 35

[उत्तर:। (ख)]

18. एकचुनावकेलिए**,** जहांकेवलदोउम्मीदवारहोतेहैं**, 43%** वोटपानेवालेउम्मीदवार **420** मतोंकेबहुमतसेखारिजकरदिएजातेहैं।तबकुलवोटोंकीसंख्यायहमानतेहुएदर्जकीगईकिकोईशून्यवोटनहींहैं:

(a) 2700 (b) 2800
(c) 3200 (d) इनमेंसेकोईनहीं

[उत्तर:। (घ)]

19. 280 के **450 + 45%** के **28%** कामूल्यांकनकरें:

(a) 232 (b) 242
(c) 252 (d) 262

[उत्तर। (सी)]

20. प्रतिशत **5:20** केअनुपातकेरूपमेंव्यक्तकियागया:

(ए) ५०% (बी) १२५%

(c) 25% (d) इनमेंसेकोईनहीं

[उत्तर। (सी)**]**

21. 2.09 प्रतिशतकेरूपमेंव्यक्तकियाजासकताहै (ए) **2.09% (**बी) **20.9**

(c) 209% (d) 0.029%

[उत्तर। (सी)**]**

22. 64 किमीके **24** मीटरकितनेप्रतिशतहै:

(a) 0.756 (b) 0.0357
(c) 0.575 (d) 0.0375

[उत्तर। (घ)**]**

23. दूधकीखपतरु। **120.** इसेबढ़ाकररु। **150.** खपतमेंप्रतिशतवृद्धिक्याहै**?**

(ए) ३५% (बी) २५%

(c) 59% (d) 55%

[उत्तर। (ख)**]**

24. 29 प्रतिशतसेंटीमीटरकितनेप्रतिशतएकलीटरहै:

(ए) **2.0% (**बी) **4.9%**

(c) 2.9% (d) 3.2%

[उत्तर। (सी)**]**

25. एकपरीक्षामें **80%** उम्मीदवारअंग्रेजीमेंऔर **85%** उम्मीदवारगणितमेंउत्तीर्णहुए।यदिइनदोनोंविषयोंमें **73%** अभ्यर्थीउत्तीर्णहुए**,** तोदोनोंविषयोंमेंकितनेप्रतिशतउम्मीदवारफेलहुए**?**

(a) 8 (b) 15
(c) 27 (d) 35

[उत्तर: (क)**]**

COMMISSION AND BROKERAGE

Multiple Choice Type Questions

1. An agent is entitled to a commission of 2,750 @5½% on turnover. Find the turnover:

(a) 1,000 **(b) 10,000**
(c) 5,000 **(d) 50,000**

[Ans. (d)]

2. An agent sold goods worth 3,640 on which he is given 2 ½% commission. The amount of his commission is :

(a) 19 **(b) 91**
(c) 16 **(d) 61**

[Ans. (b)]

3. An agent sold goods worth 7,280 on which he is given @5% commission. The amount of his commission is :

(a) 728 **(b) 346**
(c) 364 **(d) 264**

[Ans. (c)]

4. For the commission of 4,500 at 4%, the amount of sales is :

(a) 150 **(b) 180**

(c) 200 **(d) None of these**

[Ans. (b)]

5. An agent charges 5% commission plus 1% del-credere commission. If he sells for 1,240 , his total earning is :

(a) 62 **(b) 74.40**

(c) 85.20 **(d) 49.69**

[Ans. (b)]

6. An agent received 600 as commission on the sale of certain property. If he charged 2½% commission , the amount for which the property is sold , is :

(a) 12,000 **(b) 48,000**

(c) 15,000 **(d) 24,000**

[Ans. (d)]

7. Mamta Bhaswar received 1,000 as commission on sale of certain property. If the rate of commission is 2½% , the selling price will be :

(a) 10,000 **(b) 40,000**

(c) 25,000 **(d) 1,00,000**

[Ans. (b)]

8. Commission on sale of 8,000 @ 8% general commission and 1% del-credere commission is :

(a) 1,680 **(b) 640**

(c) 1,040 **(d) 16,000**

[Ans. (a)]

9. If a broker gets 120 as brokerage on a transaction of 4,000 , then rate of brokerage is :

(a) 3% **(b) 2%**

(c) 1.2% **(d) 4%**

[Ans. (a)]

10. Brokerage on 8,000 @ 3.5% is :

(a) 280 **(b) 208**

(c) 118 **(d) 108**

[Ans. (a)]

11. Principal got 202 on the sale of suitcase in 240. The rate of commission is :

(a) 15 5/6% **(b) 15 5/8%**

(c) 18 41/50% **(d) 18 5/6%**

[Ans. (a)]

12. For the commission of 1000 at 10% the amount :

(a) 9,000 **(b) 10,000**

(c) 11,000 **(d) 10,500**

[Ans. (b)]

13. An agent gets a commission of 10% on the sale price of a good. Find the amount of his commission if the sales amount to 5,000 :

(a) 100 **(b) 500**

(c) 10,000 **(d) 50,000**

[Ans. (b)]

14. A scooter was sold for 8,000 through an agent. The agent charge his commission @ 1% from purchaser and 1½% from the seller. The amount of his total commission is :

(a) 120 **(b) 220**

(c) 200 **(d) 400**

[Ans. (c)]

15. An agent is allowed 5% general commission and 2% del-credere commission. His cash and credit sales were 1,000 and 2,000 respectively. How much commission will he get?

(a) 90 **(b) 140**

(c) 150 **(d) 190**

[Ans. (d)]

16. How many pens an agent need to sell at 8.55 each to earn a commission worth 85.50 at the rate of commission 5% ?

(a) 200 **(b) 300**

(c) 400 **(d) 500**

[Ans. (a)]

17. An agent received 600 as commission on the sale of a certain property. If the amount for which the commission was obtained was 24,000 , then the rate percent of commission is :

(a) 2/5% **(b) 5/2%**

(c) 2% **(d) 5%**

[Ans. (b)]

18. A person sold a house for 36,000 through a broker and gave 216 as brokerage. The rate percent of brokerage is :

(a) 5/3% **(b) 3/6%**

(c) 5/6% **(d) 3/5%**

[Ans. (d)]

19. If a client buys shares worth 1,00,000 and sells shares worth 1,00,000 through a stock broker , then the maximum brokerage payable is :

(a) 4,000 **(b) 5,000**

(c) 2,000 **(d) 6,000**

[Ans. (b)]

20. A property agents gets a commission of 3% by selling an apartment for 2,50,000. The commission received by agent is :

(a) 7,350 **(b) 7,300**

(c) 7,500 **(d) 8,200**

[Ans. (c)]

21. A person sold some part of his land for 1,500,000 through a broker charged 5½% brokerage , in relation to the sale. Then the amount received by the seller is :

(a) 8,250 **(b) 1,14,750**

(c) 7,250 **(d) 1,15,750**

[Ans. (b)]

22. A person sells a house for 35,000 in all through a broker by giving 2% brokerage , find the amount received by the house seller .

(a) 714 **(b) 34,986**

(c) 741 **(d) 34,968**

[Ans. (b)]

23. A person or an institution that helps in selling the goods on credit and take responsibility to collect this amount is called :

(a) Del-credere Agent **(b) Sale-purchase agent**

(c) Insurance Agent **(d) Commission Agent**

[Ans. (a)]

24. The formula i.e. rate of commission*amount of sales/100 states :

(a) Amount of commission **(b)Amount of sales**

(c)Amount of del-credere commission (d)None of these [Ans.a]

25. The formula i.e. amount of commission *100/rate of commission states :

(a)Amount of commission

(b) Amount of sales

(c)Amount of del-credere commission

(d)None of these

[Ans.b]

कमिशन एवं दलाली

Multiple Choice Type Questions

1. एक एजेंट टर्नओवर पर **2,750 @ 5 on%** के कमीशन का हकदार है। कारोबार खोजें:

(a) 1,000 **(b) 10,000**

(c) 5,000 **(d) 50,000**

[Ans. (d)]

2.एक एजेंट ने **3,640** का सामान बेचा, जिस पर उसे **2**।% कमीशन दिया गया। उनके कमीशन की राशि है:

(a) 19 **(b) 91**

(c)16 **(d) 61**

[Ans. (b)]

3.एक एजेंट ने **7,280** का माल बेचा, जिस पर उसे **5%** कमीशन दिया जाता है। उनके कमीशन की राशि है:

(a) 728 **(b)346**

(c) 364 **(d) 264**

[Ans. (c)]

4. 4% पर **4,500** के कमीशन के लिए, बिक्री की राशि है:

(a) 150 **(b) 180**

(c) 200 **(d) None of these**

[Ans. (b)]

5. एक एजेंट **5%** कमीशन और **1%** डेल-क्रेडिट कमीशन लेता है। यदि वह **1,240** में बेचता है, तो उसकी कुल कमाई है:

(a) 62 **(b) 74.40**

(c) 85.20 **(d) 49.69**

[Ans. (b)]

6. एक एजेंट को निश्चित संपत्ति की बिक्री पर कमीशन के रूप में **600** प्राप्त हुए। यदि उसने **2 property%** कमीशन लिया, तो वह राशि जिसके लिए संपत्ति बेची जाती है, वह है:

(a) 12,000 **(b) 48,000**

(c) 15,000 **(d) 24,000**

[Ans. (d)]

7. ममता **Bhaswar** कुछ संपत्ति की बिक्री पर कमीशन के रूप में **1000** का स्वागत किया। आयोग की दर **2½%** है, तो बिक्री मूल्य होगा:

(a) 10,000 (b) 40,000

(c) 25,000 (d) 1,00,000

[Ans. (b)]

8.आयोग

(a) 1,680 **(b) 640**

(c) 1,040 (d) 16,000
[Ans. (a)]

9. यदि किसी ब्रोकर को **4,000** के लेनदेन पर ब्रोकरेज के रूप में **120** मिलता है, तो ब्रोकरेज की दर है:

(a) 3% (b) 2%
(c)1.2% (d)4%
[Ans. (a)]

10.8,000 @ 3.5% पर ब्रोकरेज है:

(a)280 (b)208
(c)118 (d)108
[Ans. (a)]

11.240 में सूटकेस की बिक्री पर प्रिंसिपल को **202.** कमीशन की दर है:

(a)15 5/6% (b)15 5/8%
(c)18 41/50% (d)18 5/6%
[Ans. (a)]

12. 1000 के कमीशन के लिए **10%** राशि:

(a)9,000 (b)10,000
(c)11,000 (d)10,500
[Ans. (b)]

13. एक एजेंट को एक अच्छे की बिक्री मूल्य पर **10%** का कमीशन मिलता है। उसके कमीशन की राशि का पता लगाएं, अगर बिक्री की राशि **5,000:**

(a) 100 (b) 500
(c)10,000 (d) 50,000
[Ans. (b)]

14. एक एजेंट के जरिए स्कूटर को **8,000** में बेचा गया था। एजेंट अपना कमीशन **@ 1%** क्रेता से और **1 from%** विक्रेता से वसूलता है। उनके कुल कमीशन की राशि है:

(a)120 (b)220
(c)200 (d)400
[Ans. (c)]

15. एक एजेंट को **5%** सामान्य कमीशन और **2%** डेल-क्रेडिट कमीशन की अनुमति है। उनकी नकदी और क्रेडिट बिक्री क्रमशः **1,000** और **2,000** थी। उसे कितना कमीशन मिलेगा**?**

(a)90 (b)140
(c)150 (d)190
[Ans. (d)]

16. कमीशन की **5%** की दर से **85.50** के कमीशन के लिए प्रत्येक एजेंट को **8.55** पर कितने पेन बेचने की आवश्यकता है**?**

(a)200 (b)300
(c)400 (d)500
[Ans. (a)]

17. एक एजेंट को एक निश्चित संपत्ति की बिक्री पर कमीशन के रूप में **600** प्राप्त हुए। यदि कमीशन प्राप्त करने के लिए राशि **24,000** थी, तो आयोग की दर प्रतिशत है:

(a) 2/5% (b)5/2%
(c)2% (d)5%
[Ans. (b)]

18. एक व्यक्ति ने एक दलाल के माध्यम से **36,000** में एक घर बेचा और **216** को दलाली के रूप में दिया। दलाली का प्रतिशत प्रतिशत है:

(a)5/3% (b)3/6%
(c)5/6% (d)3/5%
[Ans. (d)]

19. यदि कोई ग्राहक **1,00,000** मूल्य के शेयर खरीदता है और स्टॉक ब्रोकर के माध्यम से **1,00,000** शेयर बेचता है**,** तो अधिकतम ब्रोकरेज देय है:

(a)4,000 (b)5,000
(c)2,000 (d)6,000
[Ans. (b)]

20.एक संपत्ति एजेंटों को **2,50,000** के लिए एक अपार्टमेंट बेचकर **3%** का कमीशन मिलता है। एजेंट द्वारा प्राप्त कमीशन है:

(a)7,350 (b)7,300
(c)7,500 (d) 8,200
[Ans. (c)]

21. एक व्यक्ति ने अपनी जमीन के कुछ हिस्से को बिक्री के संबंध में **5 broker%** ब्रोकरेज शुल्क वाले दलाल के माध्यम से **1,500,000** में बेच दिया। फिर विक्रेता द्वारा प्राप्त राशि है:

(a)8,250 (b)1,14,750
(c)7,250 (d)1,15,750
[Ans. (b)]

22. एक व्यक्ति **2%** ब्रोकरेज देकर एक दलाल के माध्यम से सभी के लिए **35,000** में एक घर बेचता है**,** घर विक्रेता द्वारा प्राप्त राशि का पता लगाएं।

(a) 714 **(b) 34,986**
(c) 741 **(d) 34,968**
[Ans. (b)]

23.एक व्यक्ति या एक संस्था जो क्रेडिट पर सामान बेचने में मदद करती है और इस राशि को इकट्ठा करने की जिम्मेदारी लेती है:

(a)डेल-क्रेडिट एजेंट (**b)**बिक्री-खरीद एजेंट

(c)बीमा एजेंट (**d)**दलाल

[Ans. (a)]

24. सूत्र अर्थात् कमीशन की दर * बिक्री / **100** राज्यों की राशि:

(a) कमीशन की राशि (**b)**बिक्री की राशि

(c)डेल-क्रेडियर कमीशन की राशि (**d)**इनमें से कोई नहीं **[Ans.a]**

25. सूत्र यानी कमीशन की राशि * कमीशन राज्यों की दर / **100:**

(a)कमीशन की राशि (**b)** बिक्री की राशि

(c)डेल-क्रेडियर कमीशन की राशि (**d)**इनमें से कोई नहीं **[Ans.b]**

DISCOUNT

Multiple type of question

1. Discount @ 10%+10% on an article sold for Rs.100 is :

(a) Rs. 10 **(b) Rs. 15**

(b) Rs. 19 (d) Rs. 20

[Ans. (c)]

2. Cash discount given on:

(a) List price (b) selling price

(b) cost price (d)None of these

[Ans. (b)]

3. The printed value of an electric fan is Rs. 500. It is sold at 10% discount. But due to change of season the shopkeeper declares 10% additional discount. The sale price of the fan is:

(a) Rs. 455 (b) Rs. 405

(b) Rs. 450 (d) Rs. 400

[Ans. (b)]

4. A suitcase of Rs. 240 is sold for Rs.202. The rate of discount is:

(a) 15 5/6% (b) 15 5/8%

(b) 18 41/50% (d) 18 5/6%

[Ans. (b)]

5. By a selling item of Rs. 550 is Rs. 500, the rate of discount is :

(a) 11% (b)10%

(a) 9 1/11% (d) 11 1/9%

[Ans. (c)]

6. The cost price of a sofa set is Rs. 15,750. The sales tax is charged at 12%. If the shopkeeper allows a discount of 10%, the amount paid for the sofa set is:

(a) Rs.15,700 (b) Rs. 15,876

(b) Rs.14,273 (d) Rs.19,845

[Ans. (b)]

7. A radio dealer sold a radio for Rs. 490 the selling price of which was Rs.560. The rate of trade discount is:

(a) 3 1/9% (b) 7 1/9%

(b) 11 1/9% (d) 9 1/11%

[Ans. (c)]

8. A man purchased a cow for Rs.3000 and sold it the same day for Rs.3600, allowing the buyer a credit of 2 years. If the rate of interest be 10% p.a., then the man has a gain of:

(a) 0% (b) 5%

(c) 7.5% (d) 10%

[Ans. (a)]

9. The true discount on Rs.2562 due 4 months hence is Rs.122. The rate percent is:

(a) 12% (b) 13%

(c) 15% (d) 14%

[Ans. (c)]

10. Sonali could not decide between discount of 30% or two successive discounts of 25% and 5%, both given on shopping of Rs. 2000. What is the difference between both the discounts?

(a) Rs.15 (b) Rs.25

(c) Rs.100 (d) There is no difference

[Ans. (b)]

11. There is a 10% discount on a dozen pairs of trousers market at Rs.8000. How many pair of trousers can be bought with Rs.2400?

(a) 7 (b) 2

(c) 4 (d) 8

[Ans. (c)]

12. If a shopkeeper gives 20% discount and then 10% discount on a pen, which has the market price of Rs.500, how much would be selling price of the pen?

(a) Rs.350 **(b) Rs.150**

(c) Rs.320 **(d) Rs.360**

[Ans. (d)]

13. Simran gets a discount of 25% on Rs.3600 oven. Since she pays cash, she gets additional 2% discount too. How much does she pay?

(a) Rs.2864 **(b) Rs.2468**

(c) Rs.2548 **(d) Rs.2646**

[Ans. (d)]

14. A vase has a market price of Rs. 560. Simran pays Rs.336 for it because she got two successive discounts, one of 20% and other of:

(a) 20% **(b) 15%**

(c) 25% **(d) 10%**

[Ans. (c)]

15. Successive discounts of 20% and 15% are equivalent to a single discount of:

(a) 68% **(b) 65%**

(c) 35% **(d) 32%**

[Ans. (d)]

16. Raj decides to sell his watch at 5% discount. But his brother buys it from him and gives his brother 8% discount. Due to this Raj gets Rs. 45 less in profit. What was the marked price of the watch?

(a) Rs. 1500 **(b) Rs. 1800**

(c) Rs. 6000 **(d) Rs. 9000**

[Ans. (a)]

17. Raj got a new chair for 35% discount. Had Raj got no discount, Raj would have had to pay Rs. 224 more. How much did Raj pay for the chair?

(a) Rs. 46 **(c) Rs. 640**

(c) Rs. 208 **(d) Rs. 224**

[Ans. (a)]

18. If successive discounts are 15% and 10% then, what is its single equivalent discount?

(a) 12.5% **(b) 24.5%**

(c) 23.5% **(d) 20%**

[Ans. (c)]

19. There was 25% off on handbags. Madhu bought a handbag. She also got a 10% discount for paying cash. She paid Rs. 405. What as the price tag on the handbag?

(a) Rs. 575 **(b) Rs. 625**

(c) Rs. 450 **(d) Rs. 600**

[Ans. (d)]

20. Chandrika raised the price of their products by 40%. How much discount should they give so as to sell the products on no profit no loss basis?

(a) 40% **(b) 28.5%**

(c) 22.5% **(d) 32.75%**

[Ans. (b)]

21. Blackberry announced a discount of 25% on their trousers. Vivek went to shop. He want to save Rs. 400 in discount. How many trousers should he buy to do so, if trousers cost Rs. 320?

(a) 5 **(b) 4**

(c) 10 **(d) 50**

[Ans. (a)]

22. Gurpreet went to a shop and bought a sofa. She got a 20% discount on it. Had she gotten 25% discount she would have send Rs. 1000 more. How much did she pay for the sofa?

(a) Rs. 5,000 **(b) Rs. 10,000**

(c) Rs. 20,000 **(d) Rs. 25,000**

[Ans. (c)]

23. George gets a discount of 30% and then 20% on his food bill of Rs. 1250. What is the total discount he got?

(a) 44% **(b) 55%**

(c) 52% **(d) 25%**

[Ans. (a)]

24. How much does the sarees sales revenue of Uday increase, if Uday announces 25% discount on sarees and the saree sales volume increase by 40%?

(a) 15% increase **(b) 5%increase**

(c) -5% increase **(d) There is no increase**

[Ans. (b)]

25. After deducting a commission of 5%, a TV set costs Rs. 9595. Its marked price is:

(a) Rs. 10000 **(b) Rs. 10074.75**

(c) Rs. 10100 **(d) Rs. 12000**

कटौती / बट्टा

Multiple type of question

1. 100 रुपये में बिकने वाले लेख पर छूट **@ 10% + 10%** है:

A) रुपये। **10 C)** रु। **15**

C) रुपये। **19 D)** रु। **20**

[Ans. (c)]

2. नकद छूट पर दिया गया:

A) सूची मूल्य **B)** बिक्री मूल्य

C) लागत मूल्य **D)** इनमें से कोई नहीं

[Ans. (B)]

3. विद्युत पंखे का मुद्रित मूल्य रु। **500.** इसे **10%** की छूट पर बेचा जाता है। लेकिन सीज़न बदलने के कारण दुकानदार **10%** अतिरिक्त छूट की घोषणा करता है। प्रशंसक की बिक्री मूल्य है:

A) Rs. 455 **(b) Rs. 405**

B) Rs. 450 **(d) Rs. 400**

[Ans. (b)]

4. 240 रुपये का एक सूटकेस। **202** रुपये में बेचा जाता है। छूट की दर है:

A) 15 5/6% **(b) 15 5/8%**

C) 18 41/50% **(d) 18 5/6%**

[Ans. (b)]

5. रुपये की बिक्री आइटम द्वारा। **550** रु। **500,** छूट की दर है:

(a) 11% **(b)10%**

C) 9 1/11% **(d) 11 1/9%**

[Ans. (c)]

6. एक सोफा सेट की लागत मूल्य रु। **15,750**। बिक्री कर **12%** पर लिया जाता है। यदि दुकानदार **10%** की छूट देता है, तो सोफा सेट के लिए भुगतान की गई राशि है:

A) Rs.15,700 **(b) Rs. 15,876**
C) Rs.14,273 **(d) Rs.19,84**

[Ans. (b)]

7. एक रेडियो डीलर ने एक रेडियो को रुपये में बेचा। **490** का विक्रय मूल्य रु .**60** था। व्यापार छूट की दर है:

A) 3 1/9% **(b) 7 1/9%**
C) 11 1/9% **(d) 9 1/11%**

[Ans. (c)]

8. एक आदमी ने **300** रुपये में एक गाय खरीदी और उसी दिन उसे **600** रुपये में बेच दिया, जिससे खरीदार को **2** साल का क्रेडिट मिल गया। यदि ब्याज की दर **10% p.a.** है, तो आदमी को इसका लाभ मिलेगा:

(a) 0% **(b) 5%**
(c) 7.5% **(d) 10%**

[Ans. (a)]

9. 4 महीने के लिए **Rs.2562** पर असली छूट इसलिए **Rs.122** है। दर प्रतिशत है:

(a) 12% **(b) 13%**
(c) 15% **(d) 14%**

[Ans. (c)]

10. सोनाली **30%** की छूट या **25%** और **5%** की दो रियायती छूटों के बीच फैसला नहीं कर सकी, दोनों को रु। की खरीदारी पर दिया गया। **2000.** दोनों छूटों के बीच क्या अंतर है?

(a) Rs.15 **(b) Rs.25**
(c) Rs.100 **(d) There is no difference**

[Ans. (b)]

11. एक दर्जन जोड़ी पतलून बाजार पर रु। **8000** में **10%** की छूट है। **Rs.2400** के साथ कितने जोड़े पतलून खरीदे जा सकते हैं?

(a) 7 **(b) 2**
(c) 4 **(d) 8**

[उत्तर। (**C)]**

12. यदि कोई दुकानदार पेन पर **20%** की छूट और फिर **10%** की छूट देता है, जिसका बाजार मूल्य **500** रुपये है, तो पेन की बिक्री मूल्य कितना होगा?

(a) Rs.350 **(b) Rs.150**
(c) Rs.320 **(d) Rs.360**

[Ans. (d)]

13. सिमरन को **Rs.3600** ओवन पर **25%** की छूट मिलती है। चूंकि वह नकद भुगतान करती है, इसलिए उसे अतिरिक्त **2%** की छूट भी मिलती है। वह कितना भुगतान करती है?

(a) Rs.2864 (b) Rs.2468
(c) Rs.2548 (d) Rs.2646

[Ans. (d)]

14. एक फूलदान का बाजार मूल्य रुपये है। **560.** सिमरन ने इसके लिए रु। **363** का भुगतान किया क्योंकि उसे लगातार दो छूट मिलीं, **20%** में से एक और अन्य:

(a) 20% **(b) 15%**
(c) 25% **(d) 10**
[Ans. (c)]

15. 20% और **15%** की क्रमिक छूट एक एकल छूट के बराबर है:

(a) 68% **(b) 65%**
(c) 35% **(d) 32%**
[Ans. (d)]

16. राज ने अपनी घड़ी को **5%** छूट पर बेचने का फैसला किया। लेकिन उसका भाई उससे खरीदता है और अपने भाई को **8%** की छूट देता है। इसके कारण राज को रु। लाभ में **45** कम। घड़ी का चिह्नित मूल्य क्या था**?**

(ए) रु। **1500 (**बी) रु। **1800**

(c) रु। **6000 (**डी) रु। **9000**

[उत्तर। (ए)]

17. राज को **35%** छूट के लिए एक नई कुर्सी मिली। अगर राज को कोई छूट नहीं मिलती**,** तो राज को रुपये देने पड़ते। **224** अधिक। राज ने कुर्सी के लिए कितना भुगतान किया**?**

(ए) रु। **46 (**सी) रु। **640**

(c) रु। **208 (**डी) रु। **224**

[उत्तर। (ए)]

18. यदि क्रमिक छूट **15%** और **10%** है**,** तो इसकी एकल समकक्ष छूट क्या है**?**

(ए) **12.5% (**बी) **24.5%**

(c) 23.5% (d) 20%

[उत्तर। (सी)]

19. हैंडबैग पर **25%** की छूट थी। मधु ने एक हैंडबैग खरीदा। उसे नकद भुगतान करने पर **10%** की छूट भी मिली। उसने रु। **405.** हैंडबैग पर कीमत के रूप में क्या है**?**

(A) रु। **575 (B)** रु। **625**

(c) रु। **450 (D)** रु। **600**

[उत्तर। (**d)]**

20. चंद्रिका ने अपने उत्पादों की कीमत **40%** बढ़ा दी। कोई लाभ नहीं हानि के आधार पर उत्पादों को ब**D**चने के लिए उन्हें कितनी छूट देनी चाहिए**?**

(a) 40% **(b) 28.5%**
(c) 22.5% **(d) 32.75%**
[उत्तर। (**B)]**

21. ब्लैकबेरी ने अपने पतलून पर **25%** की छूट की घोषणा की। विवेक शॉपिंग करने चला गया। वह रुपये बचाना चाहते हैं। **400** में छूट। ऐसा करने के लिए उसे कितने पतलून खरीदने चाहिए**,** अगर पतलून की कीमत रु। **320?**

(a) 5 (b) 4
(c) 10 (d) 50
[उत्तर। (**A)]**

22. गुरप्रीत एक दुकान पर गया और एक सोफा खरीदा। उस पर **20%** की छूट मिली। अगर उसने **25%** की छूट पा ली होती तो वह रु। **1000** अधिक। सोफे के लिए उसने कितना भुगतान किया**?**

(ए) रु। **5,000 (**बी) रु। **10,000**

(c) रु। **20,000 (**डी) रु। **25,000**

[उत्तर। (सी)**]**

23. जॉर्ज को उनके खाने के बिल पर **30%** और फिर **20%** की छूट मिलती है। **1250.** उसे कुल कितनी छूट मिली**?**

(a) 44% **(b) 55%**
(c) 52% **(d) 25%**

[उत्तर। (**A)]**

24. उदय की साड़ियों की बिक्री में कितना इजाफा होता है**,** अगर उदय साड़ियों पर **25%** छूट और साड़ी बिक्री की मात्रा में **40%** की वृद्धि की घोषणा करता है**?**

(a) 15% वृद्धि (**b) 5%** वृद्धि

(c) -5% वृद्धि (**d)** कोई वृद्धि नहीं है

[उत्तर। (**B)]**

25. 5% कमीशन काटने के बाद**,** एक टीवी सेट की कीमत रु। **9595.** इसकी चिह्नित कीमत है:

(ए) रु। **10000 (**बी) रु। **10074.75**

(c) रु। **10100 (**डी) रु। **12000**

Q.1 The ratio between the price of two cows costing Rs. 1,500 and Rs. 1,000.
(a) 3:1 **(b)** 3:2 (c) 3:4 (d) 4:3

Q2. The ratio between 1 meter and 1 kilometer is.
(a) 1 : 0.001 (b) 1 : 0.0001 (c) 1 : 100 **(d)** 1 : 1,000

Q3. Which one of the ratio is smaller?
(a) 3 : 4 (b) 5 : 6 (c) 7 : 8 (d) 17 : 15

Q4. The amounts have a ratio 9:7. If the first one is worth Rs. 27, Find the other one.
(a) 21 (b) 9 (c) 7 (d) 63

Q5. The amount have a ratio of 4:3. If the first one is worth Rs.28, Find the other one.
(a) 12 **(b)** 21 (c) 4 (d) 3

Q6. Divide Rs. 560 between A and B in such a way that their shares are in the ratio of 3 : 5.
(a) 210 and 350 (b) 400 and 160 (c) 230 and 330 (d) None of these

Q7. In a class of 42 students, 6 students are girls. The ratio of boys and girls in class is.
(a) 7 : 1 (b) 7 : 6 (c) 6 : 7 **(d)** 6 : 1

Q8. The ratio of pass and fail students is 9 : 2. If 20 students fail, number of pass students is.
(a) 180 (b) 220 (c) 110 **(d)** 90

Q9. Two amount are have a ratio 8 : 9. If the first one is worth 24, the other is.
(a) 27 (b) 9 (c) 7 (d) 63

Q10. The sum of three numbers is 98. The ratio of first and second number is 2/3 and the ratio of the second and third number is 5/8. Find the third number.
(a) 20 (b) 30 **(c)** 48 (d) 50

Q11. If A : B = 2 : 3 and B : C = 5 : 6, then the value of A : B : C is.
(a) 10 : 18 : 15 **(b)** 10 : 15 : 18 (c) 15 : 10 : 8 (d) 18 : 15 : 10

Q12. In a class the ratio between the boys and girls is 1 : 3. If the number of boys is 11, then the total number of boys and girls in the class is.
(a) 31 **(b)** 33 (c) 36 (d) 42

Q13. Divided Rs. 1,216 between A and B in the ratio of 1/3 : 1/5 , A's share will be.
(a) Rs. 760 (b) Rs. 456 (c) Rs. 976 (d) Rs. 856

Q14. What should be added to each item of 2 : 5 that it becomes 5 : 6.
(a) 13 (b) 3 (c) 23 (d) 33

Q15. In a class of 75 students 15 have failed. The ratio of passed and failed is.
(a) 1 : 4 **(b)** 4 : 1 (c) 1: 5 (d) 5 : 1

Q16. A ratio in its lowest terms is 3 : 7. If the difference them is 16. Then the quantities are.
(a) 12 : 28 (b) 28 : 12 (c) 10 : 26 (d) 26 : 10

Q17. A & B divide profit in the ratio of 4 : 5. If the is Rs. 9,000 then share of A and B are.
(a) Rs. 5,000 & Rs. 4,000 (b) Rs. 3,000 & Rs. 6,000 **(c)** Rs. 4,000 & Rs. 5,000
(d) Rs. 7,000 & Rs. 2,000

Q18. In the proportion 15 : 66 :: 185 : x, then the value of x is.
(a) 814 (b) 841 (c) 714 (d) 741

Q19. The third proportional to 9 and 12 is.
(a) 12 **(b)** 16 (c) 14 (d) 24

Q20. The mean proportional of 0.32 and 0.02 is.
(a) 0.05 (b) 0.06 (c) 0.07 **(d)** 0.08

Q21. The first proportional of 2.4 and 7.6 is.
(a) 1.6 (b) 1.2 (c) 1.8 (d) 3

Q22. If 36 men complete a work in 25 days, then 15 men will complete it. (in days)
(a) 61 (b) 50 (c) 56 **(d)** 60

Q 23. The last three terms of a proportion are 8, 12, 16 respectively, then then the first term is.
(a) 6 (b) 4 (c) 2 (d) 12

Q24. If 3, x, 1083 are in the continued ratio, find x.
(a) 57 (b) 75 (c) 37 (d) 73

Q25. Find mean proportional of 4 and 16.
(a) 64 (b) 12 (c) 24 (d) 36

Q26. The salary of A, B and C are in continued proportion. If the salary of B and C are Rs. 250 and 1,250 respectively. Then salary of A is.
(a) 50 (b) 500 (c) 2,500 (d) 750

Q27. The mean proportional of 7 and 28 is.
(a) 14 (b) 21 (c) 35 (d) 42

Q28. The last three terms of a proportion are 2, 3, 6 respectively, then then the first term is.
(a) 1 (b) 4 (c) 8 (d) 10

Q29. If 2, x, 8 are in the continued ratio, find x.
(a) 4 (b) 6 (c)0 (d) 10

Q30. The third proportional to 16 and 24 is.
(a) 36 (b) 20 (c) 30 (d) 36

Q31. What is the fourth proportion of 48, 36 and 4.

(a) 3 (b) 24 (c) 12 (d) 4

Q32. 4/5 of price means.

(a) 20% (b) 40% (c) 60% **(d)** 80%

Q33. The value of 12½ of Rs.500 is.

(a) Rs.60 (b) Rs.52 (c) Rs.62 **(d)** Rs.62.50

Q34. The population of a place increased from 7,680 to 8,064. The percentage increase is.

(a) 4.76% **(b)** 5% (c) 7.5% (d) 10%

Q35. What will be the 12% of Rs. 1,000.

(a) Rs. 100 **(b)** Rs.120 (c) Rs.150 (d) None of these

Q36. If percentage of saving on income is 25, then percentage of saving on expenses is.

(a) 15% (b) 25% (c) 66⅔ **(d)** 33⅓

Q37. The number whose 12½% is 175½ will be.

(a) 1,404 (b) 1,440 (c) 1,044 (d) 404

Q38. 8⅓ expressed as fraction is.

(a) 25/3 (b) 3/25 **(c)** 1/12 (d) 1/4

Q39. The consumption of sugar increased from Rs. 112 to Rs.140. The percentage increase in consumption of sugar is.

(a) 25% (b) 28% (c) 20% (d) None of these

Q40. The number whose 20% is 1/8 is.

(a) 0.625 (b) 0.652 **(c)** 6.25 (d) 62.5

Q41. In a class of 80 students, 64 passed. How much percentage of students failed

(a) 20% (b) 32% (c)16% (d) 8%

Q42. Half of 1% written as a decimal will be.

(a) 0.005 (b) 0.05 (c) 0.02 (d) 0.2

Q43. What percent of 1 kilogram is 5 grams.

(a) 0.5% (b) 5% (c) 0.005% (d) 0.2%

Q44. What percent of a day in 3 hours.

(a) 12.5% (b) 22.5% (c) 12% (d) 12.25%

Q45. Adding 33⅓ of a number in that number gives 200, 66⅔ of that number is.

(a) 100 (b) 150 (c) 200 (d) 300

Q46. A's income is 20% more than B's income. How much less is B's income that A's income.

(a) 20% (b) 83% **(c)** 16⅔% (d) 80%

Q47. There are two candidates in an election. The candidate who gots 60% vote, won the election by 5,250 votes. The votes received by the defeated candidate are.

(a) 10,500 (b) 15,000 (c) 10,050 (d) 3,421

Q 48. If 5 litre of 100% acid is added to 5 litre of 20% acid mixture, then the quantity of acid in the mixture is.

(a) 50% (b) 52.2% (c)57.5% **(d)** 60%

Q49 If average marks of 100 student are 50 , then total marks will be:

(a) 5,000 (b) 4,000 (c) 3,000 (d) none of these

Q50. Arithmetic mean of 11, 12, and 13 will be :

(a) 11 **(b)** 12 (c) 13 (d) none of these

Q51. If mode is 15 and median is 12, arithmetic mean will be :

(a) 28 (b) 15 **(c)** 12 (d) none of these

Q52. Digits are kept in ascending and descending order, for calculating:
(a) harmonic mean (b) geometric mean (c) weighted mean **(d)** median

Q53. Mode is the formula of mutual relationship between median and arithmetic:
(a) Z= 3M-2X (b) Z=3X-2M (c) X=3Z-2M (d) M=3Z-2X

Q.54 Which quartile is median:
(a) First **(b)** Second (c) Third (d) None of these

Q55. Analysis Method is used in:
(a) Arithmetic mean (b) Median (c) Mode (d) Harmonic Mean

Q56. Geometric mean is the nth root of which series:
(a) Infinite (b) Uncertain (c) Certain (d) None of these

Q57. The ratio between 1m and 1km is:
(a) 1: 0.001 (b) 1: 0.0001 (c) 1: 100 (d) 1 : 1000

Q58. Which one of the ratio is smaller?
(a) 3: 4 (b) 5 : 6 (c) 7 : 8 (d) 17 : 15

Q59. A and B divide profit in the ratio of 4:5. If the profit is Rs 9,000, than A's share is:
(a) Rs 2,000 (b) Rs 4,000 (c) Rs 5,000 (d) Rs 7,000

Q60. Two amounts have a ratio 9:7. If the first one is worth Rs 27, find the other one:
(a) 21 (b) 9 (c) 7 (d) 63

Q61. The third proportional to 9 and 12 is:
(a) 12 (b) 16 (c) 14 (d) 24

Q62. The mean proportional of 0.32 and 0.02 is:
(a) 0.05 (b) 0.06 (c) 0.07 (d) 0.08

Q63. In the proportion 15:66::185:x, the value of x is :
(a) 814 (b) 841 (c) 714 (d) 741

Q64. The first proportional to 2.4 and 7.6 is :
(a) 1.6 (b) 1.2 (c) 1.8 (d) 3

Q65. "4/5 of price" mean:
(a) 20% (b) 40% (c) 60% (d) 80%

Q66. The value of 12½% of Rs 500 is:
(a) Rs 60 (b) Rs 52 (c) Rs 62 (d) Rs 62.50

Q67. The population of a place increased from 7,680 to 8,064. The percentage increase is :
(a) 4.76% (b) 5% (c) 7.5% (d) 10%

Q68. What will be the 12% of Rs 1,000?
(a) Rs.100 (b) Rs.120 (c) Rs.150 (d) None of these

Q69. If percentage of saving on income is 25, then percentage of saving on expenses is.
(a) 15% (b) 25% (c) 66.5% (d) 33.34%

Q70. The number whose 12½% is 175½% will be :
(a) 1,404 (b) 1,440 (c)1,044 (d) 404

Q71. 'Half of 1% written as a decimal will be :
(a) 0.005 (b) 0.05 (c) 0.02 (d) 0.2

Q72. What % of 1kg is 5gm?
(a) 0.5 (b) 5 (c) 0.005 (d) 5.5

Q73. What % of a day is 3 hrs.?
(a) 12.5 (b) 22.5 (c) 12 (d) 12.25

Q74. The consumption of sugar increased from Rs112 to Rs 140. The percentage increased in consumption of sugar is
(a) 25% (b) 20% (c) 28% (d) None of these

Q75. There are two candidates in an election. The candidate who got 60% vote won the election by 5,250 votes. The votes received by the winning candidate are :

(a) 10,500 (b) 15,000 (c) 10,050 (d) 3,421

Q76. A's income is 20% more than B's income. How much less is B's income than A's income?

(a) 20% (b) 83% (c) 16.67% (d) 52%

Q77. The ratio between the prices of two cows costing Rs 1500 and Rs 1,000 is.

(a) 3 :1 (b) 3: 2 (c) 3: 4 (d) 4:3

Short Answer Type Questions :

लघुउत्तरीय प्रश्न:

Q. 1 The ratio of two numbers is 2:3 and there is sum is 85. Find the numbers.

दो संख्याओं का अनुपात 2: 3 है और योग 85 है। संख्याओं का पता लगाएं।

Q. 2 Sunil is elder than Rajesh by five years. After five years there ages would be in the ratio of 5:4. Find their present ages.

सुनील राजेश से पांच साल बड़े हैं। पाँच साल के बाद उम्र 5: 4 के अनुपात में होगी। उनकी वर्तमान उम्र का पता लगाएं।

Q. 3 'A' saves 5% of his income, what percent of expenditure is saving?

'A' अपनी आय का 5% बचाता है, तो बचत व्यय का कितना प्रतिशत होगा?

Q. 4 If 25% of the population of a city is 200? Find the total population.

यदि किसी शहर की जनसंख्या का 25% भाग 200 है? कुल जनसंख्या ज्ञात कीजिए।

Q.5 How many percent should the use of milk be increased if the price of milk is decreased by 20% so that the expenditure remains unchanged?

दूध के मूल्य में 20% की कमी होने पर दूध का उपयोग कितने प्रतिशत बढ़ जाना चाहिए ताकि व्यय अपरिवर्तित रहे?

Q.6 A scooter was sold for Rs.8000 through an agent. The agent charged his commission at the rate of 1% from purchaser and 1.5 from the seller. Find his commission.

एक स्कूटर को एक एजेंट के माध्यम से 8000 रुपये में बेचा गया था। एजेंट ने क्रेता से 1% और विक्रेता से 1.5 की दर से अपना कमीशन वसूला। उसका कमीशन ज्ञात कीजिए।

Q.7 An agent gets 8.5% general commission and 1.5% dell cradle commission. If the sale is worth of Rs.24,000, find the agents commission.

एक एजेंट को 8.5% सामान्य कमीशन और 1.5% dell cradle कमीशन मिलता है। यदि बिक्री Rs.24,000 की कीमत है, तो एजेंट का कमीशन ज्ञात कीजिए।

Q.8 The monthly sales of an agent is Rs.25,000. In the end of the year he sent Rs 2,60,250 to his principal. Find the percentage rate of commission.

एजेंट की मासिक बिक्री 25,000 रु है। वर्ष के अंत में वह अपने नियोक्ता को 2,60,250 रुपये भेजे। कमीशन की दर प्रतिशत ज्ञात कीजिए।

Q.9 Bombay dyeing allows a discount of 15% on the clothes purchased. A person purchases clothes worth Rs.470. How much money will he give?

बॉम्बे रंगाई खरीदे गए कपड़ों पर 15% की छूट देता है। एक व्यक्ति 470 रुपये के कपड़े खरीदता है। वह कितने पैसे देगा?

Q 10 A publisher supplies 22 copies for every 20 copies of the book ordered and also allows a cash discount of 10%. What is the net rate of discount to the buyer?

एक प्रकाशक ऑर्डर की गई पुस्तक की प्रत्येक 20 प्रतियों के लिए 22 प्रतियों की आपूर्ति करता है और 10% की नकद छूट भी देता है। क्रेता को कितने प्रतिशत की दर से शुद्ध बट्टा मिलता हैं ?

Long Answer Type Questions :

दीर्घउत्तरीय प्रश्न:

Q. 1 In a college of 405 students the ratio between the numbers of boys and girls is 7:2. If the number of girls is raised by 50 and the ratio of boys and girls comes to be 3:1, then find the increase in the numbers of boys.

405 छात्रों के एक कॉलेज में लड़कों और लड़कियों की संख्या का 7: 2 अनुपात है। यदि लड़कियों की संख्या में 50 की वृद्धि हुई है और लड़कों और लड़कियों का अनुपात 3: 1 हो गया है, तो लड़कों की संख्या में वृद्धि का पता लगाएं।

Q. 2 Ramesh, Mohan and Suresh play cricket. The runs scored by Ramesh and Mohan are in the ratio of 3:2. Runs of Mohan and Suresh are also in the ratio of 3:2. Together they score 418 runs. How many runs did the score individually?

रमेश, मोहन और सुरेश क्रिकेट खेलते हैं। रमेश और मोहन द्वारा बनाए गए रन 3: 2 के अनुपात में हैं। मोहन और सुरेश के रन भी 3: 2 के अनुपात में हैं। दोनों ने मिलकर 418 रन बनाए। प्रत्येक ने कितने रन बनाए?

Q. 3 Milk and water are mixed in a vessel A in the ratio of 5:2 and in a vessel B in the ratio of 8:5. In what ratio should quantities be taken from the two vessels so as to form a mixture, in which milk and water will be in the ratio of 9:4?

एक बर्तन A में दूध और पानी को 5: 2 के अनुपात में और बर्तन B में 8: 5 के अनुपात में मिलाया जाता है। मिश्रण बनाने के लिए दोनों बर्तनों में से किस अनुपात में मात्रा ली जानी चाहिए, जिसमें दूध और पानी 9: 4 के अनुपात में होगा?

Q. 4 A candidate wins the election by 2745 votes getting 65% votes. Find the total number of votes cast.

एक उम्मीदवार 2745 मतों से 65% मत प्राप्त कर चुनाव जीतता है। डाले गए मतों की कुल संख्या ज्ञात कीजिए।

Q. 5 Ram has to secure 50% of marks to pass. He gets 50 marks and field by 50 marks. Find the maximum marks.? Or in an examination 75% students passed in accountancy, 70% passed in statistics and 23 failed in both the subjects. If 136 studentPassed in both the subjects, calculate the number of candidates, who appeared in the examination.

राम को उत्तीर्ण होने के लिए 50% अंक सुरक्षित करने हैं। उसे 50 अंक मिले और 50 अंकों से क्षेत्र। अधिकतम अंक प्राप्त करें। या एक परीक्षा में 75% छात्र उत्तीर्ण हुए, 70% आँकड़ों में

और 23 दोनों विषयों में फेल हुए। यदि दोनों विषयों में 136 छात्र हैं, तो परीक्षा में उपस्थित होने वाले उम्मीदवारों की संख्या की गणना करें।

Q. 6 A manager receives a commission of 10% on the gross turnover and bonus of 5% on the sum exceeding Rs.6000. If he gets Rs.2600 as commission, find the amount of bonus.

एक प्रबंधक को सकल कारोबार पर 10% का कमीशन प्राप्त होता है और 6000 रु से अधिक की राशि पर 5% का बोनस मिलता है। अगर उसे कमीशन के रूप में 200 रुपये मिलते हैं, तो बोनस की राशि का पता लगाएं।

Q. 7 An agent gets a 5% commission on the full sale and 3% bonus on the amount of the sales exceeding Rs.10,000. He got Rs.1500 as commission, find the amount received by him as bonus.

एक एजेंट को पूर्ण बिक्री पर 5% कमीशन और बिक्री की राशि पर 3% बोनस रु। 10,000 से अधिक हो जाता है। उन्हें कमीशन के रूप में 1500 रुपये मिले, उनके द्वारा प्राप्त राशि को बोनस के रूप में मिला।

Q. 8 What do you understand by nine values table? Prepare a nine values table with an imaginary data.

नवापवर्त्य तालिका से आप क्या समझते हैं? एक काल्पनिक उदाहरण के साथ नवापवर्त्य तालिका तैयार करें।

Q. 9 Explain the concept of commission, brokerage and discount with examples.

कमीशन, दलाली और बट्टा की अवधारणाओं को उदाहरण के साथ स्पष्ट करें।

Q.10 After charging the managers commission the net profit of Shri Aayush Jain is Rs.1 6835. 9% of total profit as commission is allowed to the manager. Find managers commission and total profit.

प्रबंधकों को चार्ज करने के बाद, श्री आयुष जैन का शुद्ध लाभ 16835 रु है। कुल लाभ का 9% कमीशन के रूप में प्रबंधक को दिया जाता है। प्रबंधक का कमीशन और कुल लाभ ज्ञात करें।

Unit II

Simultaneous Equation युगपत समीकरण

MCQ

Unit 2

Objective Questios

1. If $4x + 2y = 6$, then the value of y in terms of x is:
   a. $3+3x$
   b. $6-x$
   c. $3-2x$
   d. $\frac{3+x}{2}$

2. 4x+20=0, then the value of x:
   a. -5
   b. 5
   c. −10
   d. 10

3. If 2x + y = 3 then the value of x in terms of y is :
   a. 3 − y
   b. $\frac{3-y}{2}$
   c. $\frac{y-3}{2}$
   d. $\frac{3+y}{2}$

4. Tens digitof anumberoftwodigits isxandunits digitisy. The NumberIs
   a. 10x+y
   b. 10y+x
   c. xy
   d. x+y
5. The sumoftwonumbersis64and differenceis8,the numbersare.
   a. 26,38
   b. 28,36
   c. 30,34
   d. 30,38
6. Thesum of twonumbersis7andtheirproductis12,thelargernumber is
   a. 7
   b. 6
   c. 5
   d. 4
7. The sumoftwonumbersis72.Oneofthenumberisdoubleoftheother,

The smaller numberis:
   a. 36
   b. 12
   c. 24
   d. 48
8. Twice ofthe total oftwo numbers are 80and their differenceis8. numberswillbe:
   a. 24,32
   b. 24, 16
   c. 28,20
   d. 12,20

9. A father's ageis40yearsand his daughter's ageis9years. Father's agewill bedouble then thatofhis daughter'sageafter:
   a. a18years
   b. b.20years
   c. c. 22years
   d. d.24years

10. Afractionbecomes 1/3when 1issubtractedfrom thenumeratorand 1/4 when5isadded tothe denominator.The fractioni s:

    a. $\frac{2}{3}$

    b. $\frac{1}{2}$

    c. $\frac{1}{5}$

d. $\frac{3}{5}$

11. Cramer's Rule is applied in which method
    a. Graphical Method
    b. Comparison Method
    c. Cross-Multiplication Method
    d. Substitution Method

12. Find two numbers whose sum is 8 and difference is 2 :
    a. 5, 3
    b. 8, 6
    c. 10, 6
    d. 2, 6

13. 37 is quotient when a three digit number is divided by the sum of all three digits. If digits are some than number is:
    a. 121
    b. 211
    c. 112
    d. 111

14. If 8a – 13b =96, then the value of b in terms of a is ;
    a. $\frac{96 - 8a}{13}$
    b. $\frac{96 + 13b}{8}$
    c. $\frac{8a - 96}{13}$
    d. $\frac{13b - 96}{8}$

15. If 2x + 3y = 28 and 3x + 2y = 27, then the values of x and y will be :
    a. 2, 3
    b. 4, 5
    c. 5, 6
    d. 6, 1

16. Who prepared statement of accounts ?
    a. Purchaser
    b. Seller
    c. Agent
    d. All of these

17. When Invoice is prepared?
    a. Before Sale

b. After Sale
c. After receiving the order
d. After the enquiry of goods

18. How many copies of invoice are prepared ?
a. 2
b. 4
c. 3
d. 8

19. The expenditure shown in Invoices are:
a. Actual
b. Estimated
c. Individual
d. None of these

20. Who prepare Invoices ?
a. Purchaser
b. Seller
c. Agent
d. All of the above

21. If x - 4 = 5, then the value of x will be
a. 1.5
b. 2
c. 10
d. 24

22. If 2x +y = 3 then the value of x in terms of y will be
a. 3 – y
b. $\frac{3-y}{2}$
c. $\frac{y-3}{2}$
d. $3+\frac{x}{y}$

23. If 4x +2y = 6 then the value of y in terms of x will be
a. 3 + 2x
b. 6 – x
c. 3 – 2x
d. $3+\frac{x}{2}$

24. The sum of two numbers is 20 and their difference is 4, the numbers are
a. 10, 6
b. 12, 8
c. 4, 16
d. 13, 7

25. The sum of two numbers is 72, one of the numbers is double of the other. The numbers are

a. 44, 28
b. 42, 24
c. 21, 42
d. 48, 24

26. If 1 is added to the numerator of a fraction, it becomes 1 and if 4 is added to the denominator it becomes $\frac{1}{2}$. The fraction is

a. $\frac{6}{7}$
b. $\frac{4}{5}$
c. $\frac{5}{6}$
d. $\frac{3}{2}$

27. Father's age is 3 times that of his son. 15 years ago the father's age was 9 times that of his son. The present age of father is

a. 40 years
b. 50 years
c. 60years
d. 70 years

28. Father's age is 4 times that of his son. After 6 years father's age will be 3 times that of the son. The present age of the son is

a. 12 years
b. 18 years
c. 20 years
d. 24 years

29. If 2x – 3 =4 then x is equal to

a. 7/2
b. 1/2
c. 7
d. 1

30. If 4x + 2y = 6, then y in terms of x is

a. 3 + 2x
b. 6 - x
c. 3 - 2x
d. $\frac{3+x}{2}$

31. If 2x + y =6 and x + 2y =6then the values of x and y are

a. 0, 6
b. 3, 0
c. 0, 3
d. 2, 2

32. If the sum of two numbers is 40 and the difference is 20 the numbers are

a. 15, 25

b. 10, 30
c. 5, 35
d. 30, 15

33. The father's age is 3 times of his daughter, 15 years before father's age was 9 times that of daughter. Find their present age.
    a. 60, 20
    b. 90, 30
    c. 45, 15
    d. 36, 12
34. The sum of two digits of a number is 15. On adding 9 to it the digits are reversed. The number is
    a. 87
    b. 78
    c. 68
    d. 58
35. Solution of 4x +y =24, 3x -5y =8 is
    a. $\frac{128}{23}, \frac{40}{23}$
    b. $\frac{123}{25}, \frac{40}{28}$
    c. $\frac{128}{25}, \frac{40}{25}$
    d. 4, 8
36. If 2x =y, 2y =z, the value of x, y, z are
    a. 0, 0, 0
    b. 1, 1, 1
    c. 1, 0, 2
    d. 0, 1, 2

37. If x -4 =5, then the value of x is,
    a. 1
    b. -1
    c. 9
    d. -9
38. If $\frac{x-1}{2x} = \frac{3}{4}$ then the value of x is
    a. -1
    b. -2
    c. -3
    d. -4
39. If $\frac{2-y}{x+7} = \frac{3}{5}$ then after cross multiplication the eq. will be
    a. 3x +5y = -11
    b. 5x +11y = 12
    c. x -13y = 16

d. None of these

40. If $\frac{2x-3}{3x+2}=-\frac{2}{3}$ then the value of x is
    a. $\frac{-3}{11}$
    b. $\frac{5}{12}$
    c. $\frac{7}{12}$
    d. $\frac{6}{13}$
41. If $\frac{2x}{3x+2}=3$ then the value of x is
    a. $\frac{-3}{7}$
    b. $\frac{3}{7}$
    c. $\frac{4}{7}$
    d. $\frac{5}{7}$
42. If $\frac{1-9y}{19-3y}=\frac{5}{8}$ then the value of y is
    a. $\frac{19}{29}$
    b. $\frac{-29}{19}$
    c. $\frac{-19}{29}$
    d. $\frac{29}{19}$
43. If $\frac{5z-3}{2z}=\frac{8}{9}$ then the value of z is
    a. $\frac{29}{27}$
    b. $\frac{-27}{29}$
    c. $\frac{-29}{27}$
    d. $\frac{27}{29}$
44. A man pays 5 paisa tax on Rs. 1. If the total tax paid by him is Rs. 1550, then on how much amt did he pay the tax?
    a. Rs. 15500
    b. Rs. 15505
    c. Rs. 30000
    d. Rs. 31000
45. The speed of a car is 75 km/h. how much distance will it travel in 12 sec?
    a. 120 m
    b. 200 m
    c. 225 m
    d. 250 m
46. The ratio of the length and breadth of a rectangle is 4:3. The area of the rectangle is 192 sq. cm. The perimeter of the rectangle will be
    a. 56 cm

b. 28 cm
c. 46 cm
d. 36 cm

47. The difference between two positive numbers is 72 and if one of them is divided by the other, the quotient is
    a. 22 and 94
    b. 24 and 96
    c. 20 and 92
    d. 30 and 102
48. If $\frac{x}{x+1} = \frac{4}{5}$ then what is the value of x?
    a. 5
    b. 6
    c. 8
    d. 4
49. The sum of two numbers is 45 and their ratio is 7:8. The numbers are
    a. 28, 32
    b. 35, 40
    c. 21, 24
    d. None of these

50. If the digit 5 is placed after a two digit number who's ten's digit is x one's digit is y, the new number is
    a. 10x +y +5
    b. 100x +10y +5
    c. X +y +5
    d. None of these
51. The value of x for which $\frac{x-5}{2} - \frac{x-3}{5} = \frac{1}{2}$is
    a. 5
    b. 7
    c. 8
    d. 9
52. The solution of $\frac{x+6}{4} + \frac{x-3}{5} = \frac{5x-4}{8}$ is
    a. X=2
    b. X=4
    c. X=6
    d. X=8
53. The value of x for which $\frac{2x+1}{3x-1} = \frac{3}{2}$is
    a. 1
    b. -1
    c. 2

d. -3

54. The value of x for which $(x+4)^2 - (x-5)^2 = 9$ is
    a. 1
    b. 2
    c. 3
    d. 4
55. If $3\frac{3}{4} \times 3\frac{1}{x} = 12\frac{1}{2}$ then x is equal to
    a. $\frac{1}{3}$
    b. 1
    c. 2
    d. 3
56. If $5 - \frac{x}{3} = 4$ then the value of x is
    a. 3
    b. -3
    c. 4
    d. -5
57. The sum of a number x and its reciprocal is 18. Then the eq. showing this relation is
    a. $x + \frac{1}{x} = 18$
    b. $x - 18 = \frac{1}{x}$
    c. $\mathrm{x} - \frac{1}{\mathrm{x}} = 18$
    d. $x + 18 = \frac{1}{x}$
58. The figure shows a rectangle with perimeter of 60 m. The value of x is

(x+4) cm

(3x-2) cm

    a. 7
    b. 9
    c. 12
    d. 29
59. Four-fifths of a number is greater than three-fourths of a number by 4. Then the number is
    a. 80
    b. 90
    c. 70
    d. 60
60. $\frac{2}{3}$of a number when multiplied by $\frac{3}{4}$ make it 48. The number is
    a. 32
    b. 36
    c. 48
    d. 96

61. On adding 50 to 50 % of a number, the result is the number itself. The number is
    a. 75
    b. 100
    c. 125
    d. 150
62. Thirty years ago my age was $\frac{1}{3}$ of what it is now. My present age is
    a. 50
    b. 45
    c. 40
    d. 60
63. If the sum of two consecutive multiples of 3 is 69, then the numbers are
    a. 33, 36
    b. 30, 39
    c. 27, 42
    d. 24, 45
64. The sum of three consecutive even numbers is 234, then the smallest among them is
    a. 76
    b. 78
    c. 80
    d. None of these
65. If $\frac{3}{5}$ of a number is 20 less than the original number, than the number is
    a. 40
    b. 30
    c. 45
    d. 50
66. If a number increased by 10% of itself gives 121 then that number is
    a. 100
    b. 105
    c. 110
    d. None of these
67. A and B together can complete a piece of work in 8 days, which A alone can do in 12 days. Find the number of days taken by B to complete the same work alone.
    a. 12 days
    b. 16 days
    c. 24 days
    d. 36 days
68. Invoice includes
    a. Quantity of goods
    b. Value of goods
    c. Trade discounts
    d. All above

69. At station price includes
    a. Local price
    b. Packing expenses
    c. Carriage up to station
    d. All above
70. _____ includes value of goods, packing, carriage up to station, the railway loading charges.
    a. At station price invoice
    b. F. O. R. invoice
    c. C. & F. price invoice
    d. Local invoice
71. _____ invoice prepared before purchase of goods.
    a. Ordinary invoice
    b. Proforma invoice
    c. Franco invoice
    d. All above
72. _____ expenses added in franco price invoice
    a. Packing
    b. Freight invoice
    c. Insurance
    d. None of the above
73. the expenses of invoice incurred
    a. less
    b. add
    c. both (a) & (b)
    d. none of these
74. Types of invoice are
    a. Proforma invoice
    b. Invoice
    c. Both (a) & (b)
    d. None of these
75. Uses of invoice are
    a. Compare the invoice his order
    b. Pay octroi on the basis of invoice
    c. Both (a) & (b)
    d. None of these
76. Who prepared statement of Accounts?
    a. Purchaser
    b. Seller
    c. Agent
    d. All of these
77. When Invoice is prepared?
    a. Before Sale

b. After Sale
c. After receiving the order
d. After the enquiry of goods

78. How many copies are prepared of Invoice?
a. 2
b. 4
c. 3
d. 8

79. The expenditure shown in Invoices are:
a. Actual
b. Estimated
c. Individual
d. None of these

80. Who prepare Invoice?
a. Purchaser
b. Seller
c. Agent
d. All of above

81. Which of the following is the solution for x in the simultaneous equation

$x + 7y = 5$

$x - 7y = -9$

a. X = -4
b. X = -2
c. X = 2
d. X = 3

82. Solve the system of simultaneous equations below

$2a + 5b = 16$

$10a - 3b = -4$

Which of the following is the solution for b?

a. 2
b. 3
c. 4
d. $\frac{38}{11}$

83. Consider the simultaneous equation below

$-2x + 7y = 4$ …….(i)

$-3x + 5y = -5$ …….(ii)

Which of the following are the correct steps to eliminate x from the equation

a. Multiply equation (i) by 3 and equation (ii) by 2 and subtract
b. Multiply equation (i) by 3 and equation (ii) by 2 and add
c. Multiply equation (i) by 5 and equation (ii) by 7 and subtract
d. Multiply equation (i) by 5 and equation (ii) by 7and add

84. Consider the simultaneous equation below

3x +2y = 10

4x +3y = 13

Which of the following is the solution for x?

a. 4
b. 2
c. 1
d. -2

85. Solve the system of simultaneous equations below

x + y = 4

x – y = 6

Which of the following is the value of x?

a. 10
b. -1
c. 2
d. 5

86. Solve the pair of simultaneous equations below

3x + y = 7

3x – y = 5

a. x = 2, y = 4
b. x = 2, y = 1
c. x = 1, y = 4
d. x = 1, y = -2

87. Solve the pair of simultaneous equations below

4x + 2y = 12

x + 2y = 6

a. x = 2, y = 2
b. x = 3.6, y = 1.2
c. x = 2, y = 4
d. x = 2, y = -1

88. Two matrices A and B are said to be conformable for addition if

a. Number of Columns in A equals the Number of Rows in B
b. Number of Rows in B equals the Number of Columns in A
c. Rows of A = Columns of B
d. Order of A=Order of B

89. The value of m, if x = 1, y = 2 is a solution of the equation 2x + 3y = m.

a. 5
b. 6
c. 7
d. 8

90. 3x+10 = 0 will has:

a. a.Unique solution

b. b.Two solutions
c. c.Infinitely many solutions
d. d.No solution

91. The solution of equation x-2y = 4 are :
    a. (0,2)
    b. (2,0)
    c. (4,0)
    d. (1,1)
92. Solve the equation for x:, 6x - 27 + 3x = 4 + 9 - x
    a. a.4
    b. b.5
    c. c.6
    d. None of these
93. A bag contains equal number of Rs.5, Rs.2 and Re.1 coins. If the total amount in the bag is Rs.1152, find the number of coins of each kind?
    a. 432
    b. 288
    c. 144
    d. None of these

ANSWER KEY

1. (c)
2. (a)
3. (b)
4. (a)
5. (b)
6. (d)
7. (e)
8. (b)
9. (c)
10. (a)
11. (c)
12. (a)
13. (d)
14. (a)
15. (c)
16. (b)
17. (b)
18. (a)
19. (a)
20. (b)
21. (c)
22. (b)
23. (c)
24. (b)
25. (d)
26. (c)
27. (c)
28. (a)
29. (a)
30. (c)
31. (d)
32. (b)
33. (a)
34. (b)
35. (a)
36. (a)
37. (c)
38. (b)
39. (a)
40. (b)
41. (a)
42. (b)
43. (d)
44. (d)
45. (d)
46. (a)
47. (b)
48. (d)
49. (c)
50. (b)
51. (c)
52. (d)
53. (a)
54. (a)
55. (d)
56. (a)
57. (a)
58. (a)
59. (a)
60. (d)
61. (b)
62. (b)
63. (a)
64. (a)
65. (d)
66. (c)
67. (c)
68. (d)
69. (d)
70. (b)
71. (b)
72. (d)
73. (b)
74. (c)
75. (c)
76. (b)
77. (b)
78. (a)
79. (a)
80. (b)
81. (b)
82. (b)
83. (a)
84. (a)
85. (d)
86. (b)
87. (a)
88. (d)
89. (a)
90. (c)
91. (a)
92. (c)

F. I. B.

1. Simultaneous equations are used to show …… variables.
2. Both sides of the equation will be ……
3. If the value of x is 3 is 3 in 2x + y = 10 then the value of y will be ……
4. If the value of y is 6 in 3x + y = 12 then the value of x will be ……
5. If 2y = 4 the value of in x + y = x will be ……
6. If x = $\frac{1}{4}$ then the value of y in 8x + y = 5 will be ……
7. If x = 8 and y + 6, 5x + 5y = ……
8. There are …… methods to solve simultaneous equations.
9. If 4x + y = 12, the value of y in terms if x ……
10. If 2x + y = 8 then the value of x in terms of y ……

ANSWER KEY

1. Unknown
2. Equal
3. 4
4. 2
5. 6
6. 3
7. 7
8. Five
9. 6 – 2x
10. 4 – 2y

Short Answer Type

Simultaneous equations

1 . What is meant by Simultaneous equations ?

2 . Explain the method of substitution of solving simultaneous equations .

3 . Explain the method of elimination of solving simultaneous equations .

4 . Explain the method of comparison of solving simultaneous equations .

5 . Explain the method of cross - multiplication of solving simultaneous equations .

Long Answer Type 1 . What do you mean by simultaneous equations ? Explain methods of solving simultaneous equations with examples . Practical Questions

Long Answer Type 1 . 2 . 3 .

What is meant by invoice ? Explain advantages does a purchaser and a seller get by an invoice .

Explain methods of preparing invoice on different prices .

What is meant by ordinary and proforma invoice ? Show difference between two .

What is meant by foreign invoice . Explain its characteristics and importance .

Practical Questions . Short Answer Type

1 . A sold 500 meter clothes to B @ Rs . 100 per meter . A paid packing expenses Rs . 1,000 , carriage upto station Rs . 200 , railway landing charges Rs . 80 , railway freight Rs . 400 Find out free on rail price per meter . (Ans . 102.56) 2 . A sold 100 quintles Sugar @ Rs . 2,000 per quintle . A paid packing charges Rs . 2,000 , carriage up to station Rs . 500 , railway landing…

UNIT II

युगपत् समीकरण

(SIMULTANEOUS EQUATIONS]

लघु उत्तरीय प्रश्न (Short Answer Type Questions)

1. युगपत् समीकरण का क्या अर्थ है? अथवा युगपत समीकरण से आप क्या समझते हैं?

What is the meaning of Simultaneous Equations? Or What do you understand by Simultaneous Equations?

2 युगपत् समीकरण की विशेषताएं समझाइए।

Explain the characteristics of Simultaneous Equations.

3. दो चरों में रेखीय युगपत् समीकरण $a_1x+ b_1y = c_1$, तथा $a_{2x}+ b_2y = c_2$ के अद्‌वितीय हल के लिए क्या शर्त है?

What is the condition for an unique solution of the simultaneous equations $a_1x+ b_1y = c_1$ and $a_{2x}+ b_2y = c_2$

4. संगत और असंगत युगपत् समीकरण से आप क्या समझते हैं?

What do you understand by consistent and inconsistent simultaneous equations?

5. दो चरों के युगपत समीकरण हल करने की विधियों के नाम लिखिए।

Write down the names of methods of simultaneous equations of two variables

6. निम्नांकित समीकरण हल करें :

Solve the following equation

$\frac{x}{4} + \frac{3}{y} = 3$, $\frac{x}{3} + \frac{2}{y} = 2$,

7. एक संख्या का दोगुना दूसरी से 6 अधिक है। दूसरी संख्या पहली से 6 अधिक है। संख्याएं ज्ञात करो।

If twice of a number exceeds another by 6 and the second number exceeds the first by 6, find the numbers.

8. युगपत् समीकरण कितने प्रकार के होते हैं?

How many types of simultaneous equation ?

9. बीजक कब बनाया जाता है?

When an invoice is prepared ?

10. संक्षेप में बताये- (Write short notes on)

(a) रेल पर कीमत (Free on railway price),

(b) जहाज पर कीमत (Free on Board).

11.एक काल्पनिक बीजक बनाकर दिखायें।

Prepare an imaginary format of invoice.

12.बीजक से क्या आशय है?

What is meant by Invoice ?

13.बीजक में शामिल होने वाली मदं बताईये।

Show items includes in an Invoice

14.बीजक से क्रेता को क्या लाभ मिलते हैं ?

What advantages does a purchaser get by an Invoice ?

15. बीजक से विक्रेताओं को प्राप्त होने वाले लाभ लिखिये।

Write advantages which a seller gets from Invoice ?

16.सूचनार्थ बीजक से क्या आशय है?

What is meant by proforma invoice ?

16.बीजक निर्माण की विभिन्न विधियाँ बताइये।

Show different methods of preparing invoice.

17.साधारण बीजक एवं सूचनार्थ बीजक में अन्तर बताइये।

Show difference between ordinary and proforma invoice.

18.सर्व व्यय मुक्त बीजक क्या है ?

(What is Franco invoice ?)

19.स्थानीय बीजक से क्या है ?

(What is local invoice ?)

दीर्घ उत्तरीय प्रश्न (Long Answer Type Questions)

1. युगपत् समीकरण से आप क्या समझते हैं? उन्हें हल करने की विधियों के नाम बताइए। उनमें से किसी एक का उदाहरण सहित वर्णन कीजिए।

What do you understand by simultaneous equations?Mention the name of the methods of solving them. Explain any one with example.

2. युगपत् समीकरण के हल की विधियों का उदाहरण सहित वर्णन कीजिए।

Explain methods of solving simultaneous equations with examples.

3. दो अज्ञात चरों के लिए युगपत समीकरण हल करने की दो विधियों को समझाइए।

Explain any two methods of solving simultaneous equations in two variables

4. युगपत् समीकरण हल करने की प्रतिस्थापन विधि को समझाइए।

Describe the method of substitution of solving simultaneous equations.

5. युगपत समीकरण हल करने की विलोपन विधि को उदाहरण सहित समझाइए।

Explain the method of elimination for solving simultaneous equations with example.

6. युगपत समीकरण किसे कहते हैं? युगपत समीकरण हल करने की विभिन्न विधियों को समझाइए।

What is known as simultaneous equations? Explain the different methods of solving simultaneous equations.

7. युगपत् समीकरण हल करने की वज गुणन विधि को समझाइए।

Describe the cross multiplication method of showing the simultaneous equation. (Rewa, 2001, 15) 18. पीयूष,

8. आयुष से 34 वर्ष बड़ा है। 10 वर्ष पूर्व उनकी आयु का योग 48 था। उनकी वर्तमान आयु ज्ञात कीजिए।

Piyush is 34 years alder than Ayush. 10 years ago, the total of their age was 48. Find their present ages.

9. एक व्यक्ति को इस शर्त पर रखा गया कि जिस दिन काम करेगा उसे Rs. 150 मिलेंगे. किन्तु जिस दिन अनुपस्थित रहेगा उसे Rs. 30 जुर्माना देना पड़ेगा। 30 दिन के बाद उसे कुल Rs 3,780 मिले। उसने कितने दिन काम किया?

A man was employed on the condition that he will get Rs. 150 for the day he works and will be fined Rs. 30 the day he is absent. After 30 days he got Rs. 3.780. For how many days did he work?

10. 60 वाट के 15 बल्ब 8 घंटे प्रतिदिन जलाने का खर्च Rs.72 प्रतिमाह है। 100 वाट के 18 बल्ब 7 घंटे प्रतिदिन जलाने पर होने वाला मासिक खर्च बताइए

The electricity charge of 15 bulbs, each of 60 watts for 8 hours per day, is? Rs. 72 per month. Find the monthly electricity charges of 18 bulbs of 100 watt for 7 hours per day .

11. विनय ने 10 पेटियां सिल्क कपड़े की, प्रत्येक पेटी का माप 180 सेमी. x 150 सेमी. x 120 है। निर्यात को 10 £ प्रति टन की दर से भाड़ा ज्ञात कीजिए, जबकि 108 धनमीटर वराबर 1 टन है।

Vinay exports 10 boxes of silk clothes, each measuring 180 cm x 150 cm x 120cms.Freight be charged @ £ 10 per ton of 1.08 cubic meter. Find out freight.

12.सूचनार्थ बीजक कब बनाया जाता है? साधारण बीजक तथा सूचनार्थ में बीजक अन्तर बताइये।

When a proforma invoice is prepared? Differentiate between an ordinary invoice and a proforma invoice.

13.बीजक से आप क्या समझते हैं ? इसमें किन-किन बातों का समावेश होता है? एक काल्पनिक बीजक बनाइये।

What do you understand by an invoice? What are the important points to be covered in an invoice? Prepare an imaginary invoice.

14.निम्नलिखित को समझाइए-(Explain the following)

(क) रेल पर कीमत। (Price on Rail (P.R.O.) Price),

(ख) जहाज पर कीमत। (Free on Board (FOB) Price),

(ग) स्टेशन पर्यन्त कीमत I At Station Price).

(घ) लागत भाड़ा सहित कीमत। (Cost and Freight Price).

(ड) लागत-बीमा भाड़ा सहित कीमत। (Cost Insurance and Freight (C.LE) Price)

(च) से खर्च सहित कीमत। (Ex-ship Price),

(ज) जहाज तक कीमत (FAS. Price) I (Free alongside ship Price).

15. काल्पनिक विवरण देकर एक विकल्प पत्र (Debit Note) तैयार कीजिये
Prepare a debit note with imaginary figures.

16. नाम की चिट्ठी और जमा की चिट्ठी का अन्तर बताइये।
Differentiate between a debit note and a credit note.

17. अन्तर स्पष्ट कीजिये-(Differentiate between)

(i) बीजक तथा सूचनार्थ बीजक (Invoice and Proforma Invoice)

(ii) विकलन तथा समाकलन पत्र (Debit note and Credit note)

(iii) नकद तथा व्यापारिक अपहार (Cash Discount and Trade Discount)

Unit 3

ELEMENTRY MATRIX/प्राम्भिक आव्यूह

MCQs

1. The transpose of a rectangular matrix is-
   a. Rectangular matrix
   b. Diagonal matrix
   c. Square matrix
   d. Scalar matrix
2. Transpose of a column matrix is-
   a. Zero matrix
   b. Diagonal matrix
   c. Column matrix
   d. Row matrix
3. Tow matrix A and B are multiplied to get AB if-
   a. Both are rectangular
   b. Both have same order
   c. No of columns of A is equal to the no of columns of B
   d. No of rows of A is equal to no of rows of B
4. If $|A|$ = 0 then A is-
   a. Zero matrix
   b. Singular matrix

c. Non- singular matrix
d. Zero

5. If A is a symmetric matrix, then A^t =
   a. A
   b. $|A|$
   c. 0
   d. Diagonal matrix
6. Additive inverse of matrix A is
   a. A
   b. $|A|$
   c. A^2
   d. adj $\frac{A}{|A|}$
7. In a matrix multiplication for A and B, $(AB)^t$
   a. $A^t B^t$
   b. $B^t A^t$
   c. $\frac{1}{AB}$
   d. AB
8. For a non- trivial solution, $|A|$ is-
   a. $|A| > 0$
   b. $|A| < 0$
   c. $|A| = 0$
   d. $|A| \neq 0$
9. Two matrices A and B are multiplied to get BA, if
   a. Both are rectangular
   b. Both have same order
   c. No of columns of A is equal to the no of columns of B
   d. No of rows of A is equal to no of rows of B
10. For any non-singular matrix A. A^{-1} =
    a. $|A|$ adj A
    b. $\frac{1}{|A|\ adj\ A}$
    c. $\frac{adj\ A}{|A|}$
    d. None of these
11. A matrix having m rows and n columns with $m \neq n$ is said to be a
    a. Rectangular matrix
    b. Square matrix
    c. Identity matrix
    d. Scalar matrix
12. [a b c] is a
    a. Zero matrix
    b. Diagonal matrix
    c. Column matrix
    d. Row matrix
13. Two matrices A and B are added if

a. Both are rectangular
b. Both have same order
c. No of columns of A is equal to the no of columns of B
d. No of rows of A is equal to no of rows of B

14. Transpose of a row matrix is
    a. Zero matrix
    b. Diagonal matrix
    c. Column matrix
    d. Row matrix
15. Matrix obtained by changing rows and columns is called
    a. Rectangular matrix
    b. Transpose matrix
    c. Scalar matrix
    d. None of the above
16. [0 0 0] is a
    a. Scalar matrix
    b. Diagonal matrix
    c. Identity matrix
    d. Null matrix
17. If A is a matrix of order m × n and B is a matrix of order n × p, then the order of AB is
    a. p × m
    b. p × n
    c. n × p
    d. m × p
18. transpose of a square matrix is
    a. rectangular
    b. diagonal matrix
    c. square matrix
    d. scalar matrix
19. If $|A| \neq 0$, then A is
    a. Zero matrix
    b. Singular matrix
    c. Non-singular matrix
    d. Diagonal matrix
20. If AB exists, then $(AB)^{-1}$ is
    a. $A^{-1}B^{-1}$
    b. $B^{-1}A^{-1}$
    c. AB
    d. None of the above
21. The value of $\begin{bmatrix} x & y \\ 5 & 9 \end{bmatrix} = \begin{bmatrix} 3 & 1 \\ 2 & 3 \end{bmatrix}$ x, y is-
    a. 3, 1
    b. 1, 3
    c. 5, 9
    d. 2, 3

22. Than A = $\begin{bmatrix} 2 & -2 \\ -2 & 2 \end{bmatrix}$, B = $\begin{bmatrix} 2 & 2 \\ 2 & 2 \end{bmatrix}$ A + B is-
    a. Row matrix
    b. Null matrix
    c. Column matrix
    d. Scalar matrix
23. If A = [1, 2, 3], B = [4, 5, 6] then the value of A + B is-
    a. [5, 7, 9]
    b. [3, 3, 3]
    c. [5, 7, 8]
    d. [6, 7, 9]
24. If A = $\begin{bmatrix} 6 & 2 \\ 3 & 4 \end{bmatrix}$ B = $\begin{bmatrix} 1 & 3 \\ 4 & 2 \end{bmatrix}$ then A + B will be-
    a. $\begin{bmatrix} 7 & 5 \\ 8 & 5 \end{bmatrix}$
    b. $\begin{bmatrix} 5 & -1 \\ 0 & 1 \end{bmatrix}$
    c. $\begin{bmatrix} 5 & 7 \\ 5 & 8 \end{bmatrix}$
    d. $\begin{bmatrix} 3 & -1 \\ 0 & 5 \end{bmatrix}$
25. If A= $\begin{bmatrix} -1 & 0 \\ 0 & 1 \end{bmatrix}$then then value of A^2 will be –
    a. $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$
    b. $\begin{bmatrix} 0 & 1 \\ 0 & 1 \end{bmatrix}$
    c. $\begin{bmatrix} -1 & 0 \\ 1 & 0 \end{bmatrix}$
    d. $\begin{bmatrix} 1 & 0 \\ 0 & -1 \end{bmatrix}$
26. If $\begin{bmatrix} 3 & 2 \\ x & -5 \end{bmatrix}$ = 15 then the value of x will be-
    a. 0
    b. 15
    c. 30
    d. -15
27. $\begin{bmatrix} -1 & 0 & 0 \\ 0 & -1 & 0 \\ 0 & 0 & -1 \end{bmatrix}$ is
    a. Null matrix
    b. Unit matrix
    c. Diagonal matrix
    d. Triangular matrix
28. Matrix (AB)’ is equal to-
    a. A’·B’
    b. (BA) ’
    c. B’A’
    d. A’·B

29. If $\begin{bmatrix} x & 2y \\ 3 & 5 \end{bmatrix} = \begin{bmatrix} 1 & 4 \\ 3 & 5 \end{bmatrix}$ then the value of x and y are-
    a. 1, 2
    b. 2, 1
    c. 3, 4
    d. 1, 5
30. If $\begin{bmatrix} A+3 & 2B+5 \\ -C+4 & D-2 \end{bmatrix} = \begin{bmatrix} -2 & 1 \\ 0 & 1 \end{bmatrix}$ then-
    a. A = 5, B = -2, C = 4, D = 3
    b. A = -5, B = 2, C = -4, D = 3
    c. A = 5, B = -2, C = -4, D = 3
    d. A = -5, B = -2, C = 4, D = 3
31. If A = [1, 2, 3], B = [4, 5, 6] then value of 2A + B is-
    a. [5, 7, 9]
    b. [9, 12, 15]
    c. [6, 9, 12]
    d. [6, 7, 9]
32. Number of elements in 3 × 4 matrix is-
    a. 3
    b. 4
    c. 7
    d. 12
33. If A = $\begin{bmatrix} 1 & -1 \\ -1 & 1 \end{bmatrix}$ and B = $\begin{bmatrix} 1 & 1 \\ 1 & 1 \end{bmatrix}$, then A + B will be-
    a. Null matrix
    b. Scalar matrix
    c. Column matrix
    d. Row matrix
34. The order of matrix having four columns and three rows is-
    a. 3 × 4
    b. 4 × 3
    c. 4 × 4
    d. 3 × 3
35. If A= $\begin{bmatrix} 3 & 6 & 2 \\ 4 & 1 & 7 \\ 5 & 2 & 1 \end{bmatrix}$ then the value of **A + I is :**
    a. $\begin{bmatrix} 4 & 6 & 2 \\ 4 & 2 & 7 \\ 5 & 2 & 2 \end{bmatrix}$
    b. $\begin{bmatrix} 2 & 6 & 6 \\ 4 & 0 & 7 \\ 5 & 2 & 0 \end{bmatrix}$
    c. $\begin{bmatrix} 3 & 6 & 3 \\ 4 & 2 & 7 \\ 5 & 3 & 1 \end{bmatrix}$
    d. $\begin{bmatrix} 3 & 6 & 2 \\ 4 & 2 & 7 \\ 6 & 2 & 1 \end{bmatrix}$

36. If A=$\begin{bmatrix} 2 & -2 \\ -2 & 2 \end{bmatrix}$, B= $\begin{bmatrix} 2 & 2 \\ 2 & 2 \end{bmatrix}$ then A+B is :
    a. Column Matrix
    b. Row Matrix
    c. Scalar Matrix
    d. Null Matrix
37. If A= $\begin{bmatrix} -1 & 0 \\ 0 & 1 \end{bmatrix}$ then the value of A^2 is:
    a. $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$
    b. $\begin{bmatrix} 0 & 1 \\ 0 & 1 \end{bmatrix}$
    c. $\begin{bmatrix} -1 & 0 \\ 1 & 0 \end{bmatrix}$
    d. $\begin{bmatrix} 1 & 0 \\ 0 & -1 \end{bmatrix}$
38. If A= $\begin{bmatrix} 4 & 5 & 6 \\ 2 & 3 & 1 \\ 5 & 7 & 3 \end{bmatrix}$ then the value of 2A ×I :
    a. $\begin{bmatrix} 4 & 5 & 6 \\ 2 & 3 & 1 \\ 5 & 7 & 3 \end{bmatrix}$
    b. $\begin{bmatrix} 8 & 10 & 12 \\ 4 & 6 & 2 \\ 10 & 14 & 6 \end{bmatrix}$
    c. $\begin{bmatrix} 4 & 2 & 5 \\ 5 & 3 & 7 \\ 6 & 1 & 3 \end{bmatrix}$
    d. $\begin{bmatrix} 3 & 6 & 2 \\ 4 & 2 & 7 \\ 6 & 2 & 1 \end{bmatrix}$
39. **If A =** $\begin{bmatrix} 2 & -2 & -4 \\ -1 & 3 & 4 \\ 1 & -2 & -3 \end{bmatrix}$ then the value of A^2 is
    a. **A**
    b. **0**
    c. **–A**
    d. **2A**
40. **The value of *k* when the matrix** $\begin{bmatrix} 2 & k \\ 3 & 5 \end{bmatrix}$ **does not have an inverse is**
    a. **2**
    b. **5**
    c. $\frac{10}{3}$
    d. $\frac{3}{10}$

41. If the order of matrix A is $m \times p$. And the order of B is $p \times n$. Then the order of matrix AB is ?
    (A) m × n
    (B) n × m
    (C) n × p
    (D) m × p

42. If A and B are matrices, then which from the following is true ?
    (A) A + B ≠ B + A
    (B) $(A^t)^t \neq A$
    (C) AB ≠ BA
    (D) all are true

43. What is 'a', if B= $\begin{bmatrix} 1 & 4 \\ 2 & a \end{bmatrix}$ is a singular matrix ?
    (A) 5
    (B) 6
    (C) 7
    (D) 8

44. . $(AB)^t = ?$
    (A) B^tA^t
    (B) A^tB^t
    (C) AB
    (D) BA

45. The matrix A= $\begin{bmatrix} 9 & 0 \\ 0 & 9 \end{bmatrix}$ is a ?
    (A) even matrix
    (B) odd matrix
    (C) scalar matrix
    (D) identity matrix

46. The matrix A= $\begin{bmatrix} 1 & 3 & 2 \\ 3 & 0 & 1 \\ 2 & 1 & 5 \end{bmatrix}$ is a ?
    (A) symmetric
    (B) skew-symmetric
    (C) hermitian
    (D) skew-hermitic

47. What is the order of a matrix?
    A. number of rows X number of columns
    B. number of columns X number of rows
    C. number of rows X number of rows
    D. number of columns X number of columns

48. If A = $\begin{bmatrix} 3 & 6 & 2 \\ 4 & 1 & 7 \\ 5 & 2 & 1 \end{bmatrix}$ then A + I is-
    a. $\begin{bmatrix} 4 & 6 & 2 \\ 4 & 2 & 7 \\ 5 & 2 & 2 \end{bmatrix}$

b. $\begin{bmatrix} 2 & 6 & 2 \\ 4 & 0 & 7 \\ 5 & 2 & 0 \end{bmatrix}$

c. $\begin{bmatrix} 3 & 6 & 3 \\ 4 & 2 & 7 \\ 5 & 3 & 1 \end{bmatrix}$

d. $\begin{bmatrix} 3 & 6 & 2 \\ 4 & 2 & 7 \\ 6 & 2 & 1 \end{bmatrix}$

49. Two matrices A and B are said to be conformable for addition if
    a) Number of Columns in A equals the Number of Rows in B
    b) Number of Rows in B equals the Number of Columns in A
    c) Rows of A = Columns of B
    d) Order of A=Order o
50. The multiplication of the matrices $\begin{bmatrix} 3 & 2 & 1 \\ 1 & 5 & 0 \\ 2 & 2 & 1 \end{bmatrix}$ and $\begin{bmatrix} 1 \\ 3 \\ 5 \end{bmatrix}$ gives a
    a) 3 x1 matrix.
    b) 1 x 3 matrix..
    c) 3 x 3 matrix.
    d) none of the above
51. The multiplication of the matrices $\begin{bmatrix} 3 & 1 & 5 \end{bmatrix}$ and $\begin{bmatrix} 1 & 2 & 3 \\ 2 & 1 & 5 \\ 1 & 1 & 6 \end{bmatrix}$ gives a
    a) 3 x 1 matrix.
    b) 1 x 3 matrix.
    c) 1 x 1 matrix.
    d) none of the above
52. The vertical lines of numbers in a matrix are called
    a) Rows
    b) Columns
    c) Column Matrix
    d) Row Matrix
53. If all off diagonal elements are zeros and at least one of the leading diagonal is non-zero, then matrix is calle
    a) Diagonal Matrix
    b) Scalar Matrix
    c) Identity Matrix
    d) Null Matrix
54. If any matrix A has only one column, then it is called
    a) Row Matrix
    b) Column Matrix
    c) Square Matrix

d) Rectangular Matrix

55. If a matrix A has the same number of rows and columns, then Matrix A is called
    a) Row Matrix
    b) Column Matrix
    c) Square Matrix
    d) Rectangular Matrix
56. Any matrix of order 1×n is called
    a) Row Matrix
    b) Column Matrix
    c) Square Matrix
    d) Rectangular Matrix
57. If a matrix A has m rows and n column, then order of A is
    a) n×m
    b) m+n
    c) mn
    d) m×n
58. If any Matrix A has different numbers of rows and columns, then matrix A is
    a) Row Matrix
    b) Column Matrix
    c) Rectangular Matrix
    d) Square Matrix

ANSWER KEY

1. (b)
2. (b)
3. (a)
4. (a)
5. (c)
6. (d)
7. (a)
8. (c)
9. (b)
10. (a)
11. (d)
12. (b)
13. (c)
14. (a)
15. (b)
16. (c)
17. (c)
18. (b)
19. (c)
20. (c)
21. (a)
22. (d)
23. (a)
24. (a)
25. (a)
26. (b)
27. (c)
28. (c)
29. (a)
30. (d)
31. (c)
32. (d)
33. (b)
34. (a)
35. (a)
36. (c)
37. (a)
38. (b)
39. (a)
40. (c)
41. (a)
42. (c)
43. (d)
44. (b)
45. (c)
46. (a)
47. (a)
48. (a)
49. (d)
50. (a)
51. (b)
52. (b)
53. (a)
54. (b)
55. (c)
56. (a)
57. (d)
58. (c)

Fill in the blanks

1. Matrix is a which is made by scalar number. ..... matrix.

2. The numbers written in matrix is called in row ..... of that matrix
3. There is only one …… in row matrix
4. There is only one ……. in column matrix.
5. In diagonal matrix all members except the members of principal diagonal are .....
6. In square matrix number of row and …… are same
7. In scalar matrix all members of principal diagonal are …….
8. In unit matrix the all members of principal diagonal are ……..
9. Addition of two matrices is possible if both matrices are of ……..
10. Subtraction of one matrix from second matrix is possible when both matrices are of ……..
11. The n=multiplication of matrix A & B is possible only if the no of …… of A matrix and the no of …… of B matrix will be the same.
12. $3\begin{bmatrix}1 & 2\\ 3 & 4\end{bmatrix} = \begin{bmatrix}3 & 6\\ 9 & \ldots\end{bmatrix}$
13. If A is an m × n matrix and B is an n × p matrix, then the product BA can be find out when p = ……
14. $A^{-1} = \frac{1}{(\ldots.)}$ adj. A
15. $(AB)^{-1}$ = …….
16. If $A = \begin{bmatrix}2 & 0 & 0\\ 0 & 3 & 0\\ 0 & 0 & 4\end{bmatrix}$ then A^1 = (…….)

ANSWER KEY

1. Rectangle array
2. Elements or Members
3. Row
4. Column
5. Zero
6. Columns
7. Equal
8. One]
9. Same order
10. Same order
11. Columns
12. 12
13. m
14. [A]
15. $B^{-1}\ A^{-1}$
16. $\begin{bmatrix}1/2 & 0 & 0\\ 0 & 1/3 & 0\\ 0 & 0 & 1/4\end{bmatrix}$

प्रारम्भिक आव्यूह
[ELEMENTARY MATRICES]

लघु उत्तरीय प्रश्न (Short Answer Type)

1. आव्यूह की परिभाषा दीजिये।
Give definition of matrix.
2 आव्यूह में लिखित संख्या क्या कहलाती हैं।
What is to be said the sums written in a matrix ?
3.आधार की परिभाषा दीजिए तथा उदाहरण देकर । Give definition of matrix and illustrate with example Warm, 2012, Sagar 2013, Jiwaji, 2016)
4. इकाई आव्यूह तथा अदिश आव्यूह
Distinguish between 'unit matrix' and 'scalar matrix'.
5.मैट्रिक्स क्या है? इसे किस प्रकार विन्यास किया जा सकता है?
What is matrix ? How is it arranged? Jabalpur, 2010, Bhopal, 2009, Vikram, 2015)
6. आव्यूह गुणन को परिभाषित है?
When is matrices multiplication defined?
7 किन्हीं दो आव्यूहों के गुणा करने की प्रक्रिया बताइए।
Explain the process of multiplication of two matrices
8 शून्य आव्यूह को समझाइए।
Explain null matrix.
9. वर्ग आव्यूह की उदाहरण सहित परिभाषा दीजिए।
Define square matrix with an example.
10. विकर्ण आव्यूह को समझाइए।
Explain the diagonal matrix.
11. त्रिभुजीय आव्यूह क्या है?
What is Triangular matrix?

Short Answer Type

1 . Give definition of matrix .
2 . What is to be said the sums written in a matrix ?
3 . What is raw matrix ? 4 . What is column matrix ?
5 . What is diagonal matrix ?
6 . What is square matrix ?
7 . What is scalar matrix ?
8 . What is unit or indentity matrix ?
9 . When two matrices are comparable ?
10 . When addition of two matrices are possible ?
11 . When sabtraction of are possible ?
12 . When multiplication of two matrices are possible ?
13 . When two matrices are comformable for addition and multiplication ?
14 . Describe the properties of multiplication of matrices .

दीर्घ उत्तरीय प्रश्न (Long Answer Type Questions)

1, उदाहरण सहित परिभाषा दीजिए :

Define with examples

a) पंक्ति आव्यूह (Row matrix)

b) शून्य आव्यूह (Null matrix)

c) विकर्ण आव्यूह (Diagonal matrix)

d) अदिश आव्यूह (Scalar matrix)

e) वर्ग आव्यूह (Square matrix)

f) परिवर्त आव्यूह (Transpose matrix)

2. मान ज्ञात कीजिए (Find the value)

(a) (A + B + C) ,(b) (A + B- C), (c) (A - B-C) , and (d) (A -B+ C)

If

$A=\begin{bmatrix}6 & 10 & -2 & 8\\ 0 & -3 & 6 & -9\end{bmatrix}$; $B=\begin{bmatrix}5 & 7 & 3 & -4\\ -2 & 0 & -5 & -2\end{bmatrix}$; $C=\begin{bmatrix}3 & -4 & -6 & 5\\ 4 & 7 & -9 & 8\end{bmatrix}$

3. (A+अदिश आव्यूह) का मान ज्ञात कीजिए यदि मुख्य विकर्ण 6 और आव्यूह A=

Find the value of (A + Scalar Matrix) if principal diagonal is 6

$$A=\begin{pmatrix}3 & -2 & 5\\ 4 & -8 & 2\\ 2 & 5 & -2\end{pmatrix}$$

4. एक फुटकर व्यापारी ने अपनी दुकान के लिए 20 किलो बटर, 25 किलो घी तथा 50 किलो तेल खरीदा। इनका मूल्य क्रमश: 50 रु., 60 रु., 30 रु. प्रति किलो है। कुल मूल्य ज्ञात कीजिए। आव्यूह पद्धति से हल कीजिए।

A retailer purchased for his shop 20 kg. butter, 25 kg. Ghee and 50 kg Cooking oil. Cost Price are ₹ 50, 7 60 and 30 per kg. respectively. Find the price. Solve the problem by method of matrix.

5.एक निर्माता तीन प्रकार की वस्तुएँ A, B, C निर्मित करता है, जो कि दिल्ली और मुम्बई में बेची जाती हैं। इन वस्तुओं की वार्षिक बिक्री नीचे दी गई है

A manufacturer produces three products A, B and C which he sells in Delhi and Mumbai. Annual sales volumes are indicated as follows:

शहर (City)	वस्तु (Articles)		
	A	B	**C**
दिल्ली (Delhi)	5000	7500	15000
मुम्बई (Mumbai)	6000	12000	8700
विक्रय प्रति ईकाई(Sale price per unit)	2 रु	3 रु	4 रु

आव्यूह का प्रयोग करते हुये प्रत्येक शहर की कुल वार्षिक प्राप्ति की गणना कीजिए।

Find the total annual receipts of each city by using matrix.

6. आव्यूह किसे कहते हैं? आव्यूह के कौन-कौन से प्रकार होते हैं?

What is matrix? What are different types of Matrices?

7. मैट्रिक्स की प्रारम्भिक विशेषताओं पर एक टिप्पणी लिखिए।

Write a short note on elementary properties of matrices.

8. दो आव्यूह का योग (जोड़ने) तथा गुणा के लिए अनुकूलनीय होते हैं?

When two matrices are conformable for addition and multiplication?

9. दो आव्यूह का (i) गुणन तथा (ii) योग परिभाषित है या नहीं कैसे निश्चित करोगे?

How will you decide the conformity of two matrices for their (i) product and (ii) addition?

10. यदि दो आव्यूह A तथा B ज्ञात हों तो बताए AB तथा BA दोनों कब परिभाषित होंगे?

Given two matrices A and B state when AB and BA both are defined?

11. यदि A, x क्रम का आव्यूह हो तथा B. nxp क्रम का आव्यूह हो तो क्या mxp क्रम का AB आव्यूह प्राप्त करना सम्भव है?p का क्या मान होना चाहिए जिससे कि BA ज्ञात किया जा सके? इस आव्यूह का क्रम क्या होगा?

If A is an m x n matrix and B is an nxp matrix, is it possible to find the product AB which will be an m x n matrix? What must be the value of p so that we can find the product BA? What are the dimensions of that matrix?

12. What is meant by matrix ? Explain its kinds ?

13. Explain addition of subtraction of two matrix ? Explain multiplication of two matrix . 3

Unit IV

Logarithms and Antilogarithm

Multiple Choice Questions

1) In the expression $\log_3 9 = 2$, what is the base?

a) 6

b) 2

c) 9

d) None.

[Answer (a) 3]

2) $\frac{\log \sqrt{8}}{\log 8}$ a) $\frac{1}{6}$ b) $\frac{1}{4}$

c) $\frac{1}{2}$ is equal to

d) $\frac{1}{8}$

[Answer (c) $\frac{1}{6}$]

3) What is the logarithm of any number to the base itself?

a) 0

b) 1

c) 2

d) None.

[Answer (b) 1]

4) Write $27^x = 240$ in log form.

a) Log $243^{27}=x$

b) Log $_{27}243=x$

c) 27 log x=243

d) Log $_x$ 27=243

[Answer (b) Log $_{27}$243=x]

5) Write $\log_2 128=7$ in exponential forms :-

a) $7^2=128$

b) $128=7\times2$

c) $2^7=128$

d) None.

6) What is the value of $\log_4 32$ **[Answer (c) $2^7=128$]**

a) 2.5

b) 2.3

c) 3.3

d) 1.5

7) Characteristic of logarithm 304.25 is **[Answer (a) 2.5]**

a) 3

b) 1

c) 2

d) None.

8) Log $_a$(m x n) is equal to **[Answer (c) 2]**

a) $\frac{\log_a m}{\log_a n}$

b) Log $_a$ m + Log $_a$ n

c) a log m+n

d) None.

[Answer (b) Log $_a$ m + Log $_a$n]

9) What is the characteristic of 3456.7

a) 3

b) 4

c) 5

d) 2

[Answer (a) 3]

10) Characteristic of logarithm of 4.253 is

a) 1
b) 4
c) 3
d) 0

[Answer (d) 0]

11) The value of log46 + log6 is
a) Log 46
b) Log276
c) $\frac{\log 46}{\log 6}$
d) None.

[Answer (b) log276]

12) $\text{Log}_a P - \text{Log}_a S$ can be written in logarithm as :-
a) $\text{Log}_a \frac{P}{S}$
b) $\text{Log}_a P=S$
c) $\text{Log}_a P \times \text{Log}_a S$
d) None.

[Answer (a) Log $^{a}\frac{S}{P}$ **]**

13) Log form of 3^{10} is
a) Log 3/10
b) Log 3 + 10
c) Log 3 – 10
d) 10 log 3

[Answer (d) 10 log 3]

14) If there is no base given then base of log is :-
a) 10
b) 1
c) 5
d) 2

[Answer (a) 10]

15) Subtrac t 3́ .3729- 1.6251

a) $1\acute{}$ .7478

b) $2\acute{}$ .7478

c) $\bar{3}.7478$

d) $\bar{4}.7478$

16) The value of log 35 + log 5 is :- **[Answer (a)** $\bar{1}.7478$**]**

a) 7

b) 35

c) 175

d) None.

17) Characteristic of 0.00004 is **[Answer (c) 175]**

a) $\bar{5}$

b) $\bar{3}$

c) $\bar{4}$

d) $\bar{1}$

18) What is the value of log 125 – log 5

a) 75 **[Answer (a)** $\bar{5}$ **]**

b) 25

c) 5

d) 20

19) Log_5 125 =3 write in index form :-

a) $5^3 = 125$

b) $125^5 = 3$ **[Answer (b) 25]**

c) $5 \times 125 = 3$

d) None.

[Answer (a) $5^3 = 125$]

20) If $\log_a \sqrt{2} = \frac{1}{6}$ then find a

a) 3

b) 8

c) 5

d) None.

[Answer (b) 8]

21) What is the value of 3^{36} , if given log 3= .4771213

a) 18

b) 17

c) 16

d) 20

22) Logarithm of 128.88 is :- **[Answer (a) 18]**

a) 2.1103

b) 3.1103

c) 1.1103

d) 4.1103

[Answer (a) 2.1103]

23) If log 2 = 0.3010 and log 3 = 0.4771 the value of $\log_5 512$ is :-

a) 2.870

b) 2.967

c) 3.876

d) 3.912

[Answer (c) 3.876]

24) If log 2 = 0.30103, then the value of $\log(0.05)^3$ is :-

a) 2.40961

b) 4.09691

c) 2.40961

d) 4.0699

[Answer (b) 4.09691]

25) If $a^x = b^y$, then :-

a) $\log\frac{a}{b} = \frac{x}{y}$

b) $\frac{\log a}{\log b} = \frac{x}{y}$

c) $\frac{\log a}{\log b} = \frac{y}{x}$

d) None.

26) Antilog of 1.9820 is :- a) 9594 [$\log b = x$]

[Answer (c) $\frac{\log a}{y}$

b) 959.4
c) 95.94
d) 9.594

[Answer (c) 95.54]

27) If a + b = 1, $\log_{10} x - a$ and $\log_{10} y = b$ the value of x y is :-

a) 10
b) 3
c) 1
d) 5

[Answer (a) 10]

28) If log 2 = 0.3010 the value of log 0.02 is :-

a) 2.3010
b) 1.3010
c) $\bar{1}$.3010
d) $\bar{2}$.3010

[Answer (c) $\bar{1}$.3010]

29) If log 2 = 0.30103, the value of log 20 is :-

a) $\bar{1}$.30103
b) 1.30103
c) 0.30103
d) 3.0103

[Answer (b) 1.30103]

30) The value of $\frac{8\log 2 \cdot 2\log 4}{\log 2}$ is :-

a) 2
b) 8
c) 16
d) 4

31) The value of $\log_4(4^7)$ is :-

a) 0
b) 1
c) 49
d) 7

[Answer (d) 4]

[Answer (d) 7]

32) The value of 5872 x 0.058 will be

a) 340.6
b) 3.406
c) 34.06
d) 3406

[Answer (a) 340.6]

33) If log 27 = 1.431, then the value of log 9 is :-

a) 0.934
b) 0.945
c) 0.954
d) 0.958

[Answer (c) 0.954]

34) The value of $\log_2 16$ is :-

a) $\frac{1}{8}$
b) 4
c) 8
d) 16

[Answer (b) 4]

35) The value of $\frac{6 \log_{10} 1000}{3 \log_{10} 100}$ is equal to

a) 0
b) 1
c) 2
d) 3

[Answer (d) 3]

36) What is the value of following expression :-

$$\log\left(\frac{9}{14}\right) - \log\left(\frac{15}{16}\right) + \log\left(\frac{35}{}\right)$$

d)
e) 3

a) 0
b) 2
c) 4

[Answer (a) 0]

37) If $\log_{10} 125 + \log_{10} 8 = X$, then find X is equal to :-

a) $\frac{1}{3}$

b) 0.064

c) -3

d) 3

[Answer (d) 3]

38) Value of $\log_{10}$ is :-

a) 1

b) 0

c) 3

d) None.

[Answer (a) 1]

39) If log 4 = 0.6021, then the value of 256 is :-

a) 1.2042

b) 0.2042

c) 0.4084

d) 2.4084

b) 3.0970

40) The value of log 625 – log 25 is :-

a) 25

b) 35

c) 15

d) 50

41) The value of 13.62 x 0.02453 will be

a) 0.3341

b) 0.3785

c) 0.0345

d) None.

42) Given log 5 = 0.6990, then log 125 will be

a) 2.0970

[Answer (d) 2.4084]

[Answer (a) 25]

[Answer (a) 0.3341]

c) 20.970

d) None.

43) Characteristics of .003002 will be **[Answer (a) 2.0970]**

a) 2

b) 3

c) $\bar{2}$

d) $\bar{3}$

[Answer (d)$\bar{3}$]

44) Mantissa is written :-

a) Before decimal

b) After decimal

c) With no decimal point

d) None.

[Answer (b) after decimal]

45) If $\log \frac{a}{b} + \log \frac{b}{a} = \log (a + b)$, then :-

a) a + b = 1

b) a – b = 1

c) a = b

d) $a^2 - b^2 = 1$

[Answer (a) a + b = 1]

46) if log 2 = 0.30103, the number of digits in 2^{64} is :-

a) 18

b) 19

c) 20

d) 21

[Answer (c) 20]

47) If $\log_2 \{\log_3 (\log_2 X)\} = 1$, then X is equal to :-

a) 0

b) 12

c) 128

d) 512

[Answer (d) 512]

48) If $\log_{10} 3456 = 3.5386$ then the value of antilog (2´ .5386) is :- a) 0.3456

b) 0.03456

c) 0.003456

d) 34.56

[Answer (b) 0.03456]

49) If $\log_{10} X = \log_{10} Y = Z$, then the value of X is :-

a) $\frac{Z}{Y}$

b) $10^{\frac{Z}{Y}}$

c) YZ

d) $10^{Z}Y$

[Answer (b) $10^{\frac{Z}{Y}}$ **]**

50) If $\log_{10} a = p$, $\log_{10} b = q$, then what is $\log_{10}$ (ap bq) equal to?

a) $P^2 + q^2$

b) $P^2 - q^2$

c) $P^2\ q^2$

d) $\frac{p2}{q2}$

[Answer (a) $P^2 + q^2$**]**

QUESTIONS

1. If P,A,R,N respectively represent the principal, total amount, rate and number of years, then:

a. $A=P(1+R/100)^n$

b. $A=P(1+NP/100)$

c. $A=N(1+RP/100)$

d. $A=P(1+NR/100)$

Ans: a

2. An amount of ₹600 is compound annually at the rate of 5%. The amount to be paid after 3 years is:

a. ₹694.57
b. ₹550.24
c. ₹700.32
d. ₹396.75

Ans: a

3. The compound interest on ₹480 at 16 $^{2}/_{3}$% per annum for $2^{3}/_{4}$ year will be:

a. ₹260
b. ₹252
c. ₹255
d. ₹263.33

Ans: c

4. The compound interest on ₹5000 for 3 years at 8% for first year, 10% for second year and 12% for third year, will be:

a. ₹1652.80
b. ₹1560.40
c. ₹1565.60
d. ₹1500

Ans: a

5. The compound interest on ₹540 at $16^{2}/_{3}$% per annum for 2 year is:

a. ₹735
b. ₹180
c. ₹195
d. ₹192.50

Ans: c

6. The difference between the simple interest and the compound interest on ₹600 for 1 year at 10% per annum, reckoned half-yearly is:
   a. Nil
   b. ₹6.50
   c. ₹4.40
   d. ₹1.50

   Ans: d
7. The difference between compound interests on ₹800 for 1 year at 20% per annum when compounded half-yearly and quarterly, is:
   a. Nil
   b. ₹2.50
   c. ₹4.40
   d. ₹6.60

   Ans: c
8. Simple interest on a sum at $12^1/_2$% per annum for 2 years is ₹256. The compound interest on the same sum at the same rate and for the same period is:
   a. ₹264
   b. ₹272
   c. ₹262.40
   d. ₹265.80

   Ans: b
9. A sum of money doubles itself at compound interest in 15 years. It will become eight times in:
   a. 30years
   b. 40years
   c. 45years
   d. 60years

   Ans: c
10. The difference between simple interest and compound interest for 2 year at 4% per annum is ₹20. The principal amount (in rupees) will be:
   a. 12000
   b. 12500
   c. 13000
   d. 13500

   Ans: b
11. If the compound interest of an amount at the rate of 5% per annum for 2 year is ₹123, then the principal is:
   a. ₹1000

b. ₹1100
c. ₹1200
d. ₹1300

Ans: c

12. A sum of ₹400 would become ₹441 after 2 years if the rate of compound interest were:
    a. $2^1/_2\%$
b. 5%
c. $7^1/_2\%$
d. 10%

Ans: b

13. ₹8000 amounts to ₹10648 in 3 years at compound interest. The rate of interest is:
    a. 8%
    b. 9%
c. 10%
d. 12%

Ans: c

14. The difference between the compound interest and the simple interest on a sum of money lent for 2 years at 10% is ₹40. The sum is:

a. ₹8000
b. ₹6000
c. ₹5000
d. ₹4000

Ans: d

15. The difference between compound interest and simp0le interest on ₹1250 for 2 years at 8% is:
    a. ₹2
    b. ₹4
    c. ₹6
    d. ₹8

    Ans: d

16. The compound interest on ₹2000 for 3 years is ₹315.25. The rate of interest is:
    a. 3%
    b. 4%
    c. 5%
    d. 6%

    Ans: c

17. The least number of complete years in which a sum of money put out at 20% compound interest will be more than doubled is:

a. 5years
b. 4years
c. 6years
d. 7years

Ans: b

18. At compound interest, if a certain sum of money doubles in *n* years, then the amount will be four fold in:
    a. $2n^2$years
    b. n^2 years
    c. 4*n* years
    d. 2*n* years

    Ans: d

19. A saving bank gives interest which compounds annually. Mr. X deposited ₹100 and received ₹121 at the end of second year. Rate of compound interest per annum is:
    a. 10%
    b. 20%
    c. 10.5%
    d. 20.5%

    Ans: a

20. The difference between simple and compound interest compounded yearly at the rate of 4% in a two year period on a certain amount of money is Rs.1. The amount of money is:
    a. ₹450
    b. ₹575
    c. ₹600
    d. ₹625

    Ans: d

21. A sum of money on compound interest amounts to ₹9680 in 2 years and to ₹10648 in 3 years. The rate of interest per annum is:
    a. 5%
    b. 10%
    c. 15%
    d. 20%

    Ans: b

22. The difference between compound interest and simple interest at the same rate for ₹5000 for 2 years is ₹72. The rate of interest per annum is:
    a. 6%

b. 8%

c. 10%
d. 12%

Ans: d

23. A sum money amounts to ₹6690 after 3 years and to ₹10035 after 6 years on compound interest. The sum is:

a. ₹4400
b. ₹4460
c. ₹4520
d. ₹4445

Ans: b

24. A sum amount to ₹2916 in 2 years and to ₹3149.28 in 3 years at compound interest. The sum is:

a. ₹1500
b. ₹2000
c. ₹2500
d. ₹3000

Ans: c

25. The compound interest on a certain sum of money for 2 years at 10% per annum is ₹420. The simple interest on the same sum at the same rate and for the same time will be:

a. ₹350
b. ₹375
c. ₹380
d. ₹400

Ans: d

26. A sum of ₹ 550 was taken as a loan. This is to be paid back in two equal installments. If the rate of interest be 20% compound annually, then the value of each installment is:

a. ₹421
b. ₹396
c. ₹360
d. ₹350

Ans

: c

27. The difference between the compound interest and simple interest for 2 years on a sum of money is ₹160. If the simple interest be ₹2880, the rate per cent is:

a. $5\ ^{5}/_{9}\ \%$

b. $12\ ^{1}/_{2}\ \%$

c. $11\ ^{1}/_{9}\ \%$

d. 9%

Ans: c

28. The difference between simple interest and the compound interest on a certain sum of money for 3 years at 10% per annum is ₹15.50. The sum is:

a. ₹500
b. ₹550
c. ₹600
d. ₹460

Ans:
a

29. The compound interest on a sum for 2 years is ₹832 and the simple interest on the same sum for the same period is ₹800. The difference between the compound interest and the simple interest for 3 years will be:

a. ₹48
b. ₹66.56
c. ₹98.56
d. ₹96.48

Ans: c

30. The difference between simple interest and compound interest on a sum for 2 years at 8%, when the interest is compound annually is ₹16. If the interest were compounded half-yearly, the difference in 2 years would be nearly:

a. ₹16
b. ₹16.80
c. ₹21.85
d. ₹24.64

Ans: d

31. A sum of ₹12000 deposited at compound interest becomes double after 5 years. After 20 years it will becomes:

a. ₹120000
b. ₹192000
c. ₹124000
d. ₹96000

Ans: b

32. The difference between compound interest and simple interest at the same rate of interest R percent per annum on an amount to ₹15,000 for 2 years is ₹96. What is the value of R?

a. 8
b. 10

c. 12
d. 14

Ans: a

33. There is 60% increase in an amount in 6 years at simple interest. What will be the compound interest on ₹12000 after 3 years at the same rate of interest?

a. ₹2160
b. ₹3120
c. ₹3972
d. ₹6240

Ans: c

34. An automobile Financer claims to be lending money at simple interest, but he includes the interest every six months for calculating the principal. If he is charging an interest at the rate of 10%, the effective rate of interest becomes

a. 10.25%
b. 10.5%
c. 10.75%
d. 11%

Ans: a

35. A sum of ₹10,000 is deposited for 1 year at the rate of interest 10% compounded half-yearly. What will be the interest at the end of one year?

a. ₹1000
b. ₹1025
c. ₹1050
d. ₹1100

Ans: b

36. A sum of ₹8400 was taken as a loan. This is to be paid in two equal installments. If the rate of interest is 10% per annum, compounded annually, then the value of each installment is:

a. ₹4200
b. ₹4480
c. ₹4840
d. None of the above Ans: c

37. The difference between the simple and the compound interest on a certain sum of money at 4% per annum in 2 years is ₹10. What is the sum?

a. ₹5000
b. ₹6000
c. ₹6250
d. ₹7500

Ans: c

38. The compound interest in ₹1000 at 10% p.a. for 2 years will be:
    a. 2100
    b. 21
    c. 210
    d. 02

    Ans : c

39. If compound interest is computed quarterly, then the time period becomes:
    a. Twice of the years.
    b. Half of the years.
    c. Four times of the years.
    d. One-fourth of the years.

    Ans: c

40. If the simple interest on a sum @ 5%in 3 years is ₹ 150, the compound interest shall be:
    a. 160
    b. 162
    c. 157.62
    d. 155

    Ans: c

41. If a sum of money trebles itself in 2 years at compound interest, then it will be 27 times of itself in x years. This value of x (in years) is:
    a. 18
    b. 6
    c. 12
    d. 15

    Ans: b

42. ₹ 2000 in 2 years at 4% p.a. compound interest amount to Rupees:
    a. 2160.30
    b. 2163.20
    c. 2136.20
    d. 2361.20

    Ans: b

43. If the difference of compound interest and simple interest for 2 years @ 10% p.a. on certain sum is ₹ 128.20, then principal is:

a. ₹1282
b. ₹12820
c. ₹2464
d. ₹24640

Ans: b

44. What will be the compound interest of ₹ 10,000 for 9 months at 12% p.a. when interest is compounded quarterly?

a. ₹927
b. ₹1200
c. ₹1027
d. ₹900

Ans: a

45. The sum of money that amounts to ₹ 9261 in 3 years at 5% p.a. compound interest is:

a. 7000
b. 8000
c. 9000
d. 5000

Ans: b

46. The amount of ₹ 1000 @ 4% p.a. compound interest for 3 years is (in Rupees approximately) :

a. 1125
b. 1215
c. 2115
d. 1251

Ans: a

47. If the amount is ₹ 34,300 time 3 years and rate of compound interest is $16\frac{2}{3}\%$, then principal is:

a. ₹ 21600
b. ₹ 2160
c. ₹ 26100
d. ₹ 26000

Ans: a

48. The amount of ₹ 7500 at compound interest at 4% p.a. for 2 years is :

a. ₹7800
b. ₹ 8100
c. ₹ 8112
d. ₹ 8082

Ans: c

49. Compound interest of ₹ 400 at 6% p.a. for 2 years is :

a. ₹48
b. ₹ 53.92

c. ₹ 49.44
d. ₹ 449.44

Ans: c

50. Compound interest on ₹ 400 for 2 years at 5% p.a. is (₹) :
    a. 40
    b. 31
    c. 41
    d. 51

    An
    s:
    c

SIMPLE INTEREST

1. A man borrows Rs.2,000 and pays back after 3 years at 10% simple interest. The amount paid by the man , is :

(a)Rs.2,400 (c)Rs.3,000

(b)Rs.2,600 (d)Rs.2,750

ANSWER : Option(b)

2. How much should a person lend at simple rate of interest of 5% in order to have Rs.645 at the end of 1 ½ years?

(a)Rs.580 (c)Rs.610

(b)Rs.600 (d)Rs.620

ANSWER : Option(b)

3. If the rate of simple interest is 12% p.a., the amount that would fetch interest of Rs.6,000 per annum is :

(a)Rs.7,200 (c)Rs.50,000

(b)Rs.48,543.69 (d)Rs.72,000

ANSWER : Option(c)

4. The sum of Rs.600 becomes Rs.900 after 4 years. The rate of simple interest will be : (a)10% (c)8%
(b)12% (d)12 ½%

ANSWER : Option(d)

5. The simple interest on Rs.450 at 4% p.a. for 2 ½ years is :
(a)Rs.54 (c)Rs.90
(b)Rs.22.50 (d)Rs.45

ANSWER : Option(d)

6. The interest on a sum for 4 years at 5% per annum is Rs.90, the sum is :
(a)Rs.375 (c)Rs.1,500
(b)Rs.450 (d)Rs.1,800

ANSWER : Option(b)

7. What sum will amount to Rs.2832 at 6% p.a. rate of simple interest in 3 years?
(a)Rs.2,000 (c)Rs.2,300

(b)Rs.2,200 (d)Rs.2,400

ANSWER : Option(d)

8. Simple interest of Rs.7,500 @8% per 3 years is : (a)Rs.1,200 (c)Rs.2,140

(b)Rs.1,800 (d)Rs.1,860

ANSWER : Option(b)

9. Kanak lent Rs.600 to Monika for 2 years and Rs. 150 to Anil for 4 years and received altogether from both Rs.90 as simple interest. The rate of interest is :

(a)4% (c)10%

(b)5% (d)12%

ANSWER : Option(b)

10. The simple interest on a sum of money at 5% is Rs.48 for 4 years. The simple interest on the same sum for 5 years at 4% will be : (a)Rs.40 (c)Rs.50

(b)Rs.48 (d)Rs.60

ANSWER : Option(b)

11. Rs.800 amounts to Rs.920 in 3 years at simple interest. If the interest rate is increased by 3%,it would amount to :

(a)Rs.1,056 (c)Rs.1,182

(b)Rs.1,112 (d)Rs.992

ANSWER : Option(d)

12. Simple interest of Rs.1500 @8% for 3 years is :

(a)Rs.120 (c)Rs.1,140

(b)Rs.360 (d)Rs.1,860

ANSWER : Option(b)

13. At what rate percent of simple interest a sum would double itself in 20 years ?

(a)5% (c)12 ½%

(b)10% (d)20%

ANSWER : Option(a)

14. At what rate of simple interest a sum of Rs.2,600 yields Rs.1,040 after 5 years ? (a)6% (c)8%
(b)6 ½% (d)12 ½%

ANSWER : Option(c)

15. If the simple interest of Rs.500 for 3 years in Rs.75 the rate of simple interest will be :
(a)5% (c)15%
(b)10% (d25%

ANSWER : Option(a)

16. Simple interest on Rs.300 for 7 years at 14% per annum will be :
(a)Rs.294 (c)Rs.249
(b)Rs.194 (d)Rs.149

ANSWER : Option(a)

17. If simple interest of Rs.1,500 @R% for 3 years is Rs.360, then R will be :
(a)2 (c)6

(b)4 (d)8

ANSWER : Option(d)

18. If Rs.64 amount to Rs.19.20 in 2 years, what will Rs.86 amount to in 4 years at the same rate percent per annum?

(a)Rs.137.60 (c)Rs.114.80

(b)Rs.124.70 (d)Rs.127.40

ANSWER : Option(a)

19. The simple interest at x% for x years will be Rs. x on a sum of :

(a)Rs. x (c)Rs. (100/x)

(b)Rs. 100x (d)Rs. $(100/x^2)$

ANSWER : Option(c)

20. A certain sum at simple interest amounts to Rs.1,040 in 3 years and to Rs.1,360 in 7 years. Then, the sum is :

(a)Rs.750 (c)Rs.900

(b)Rs.800 (d)None of these

ANSWER : Option(b)

21. A sum of money amounts to Rs.702 in 2 years and Rs.783 in 3 years. The rate percent per annum is :

(a)12% (c)14%

(b)13% (d)15%

ANSWER : Option(d)

22. At simple interest, a sum doubles after 20 years. The rate f interest per annum is : (a)5% (c)12%

(b)10% (d)8%

ANSWER : Option(a)

23. In what time will a sum of money double itself at 6 ¼% p.a. simple interest ?

(a) 5 years (c)12 years

(b) 8 years (d)16 years

ANSWER : Option(d)

24. A sum of money becomes 8/5 of itself in 5 years at a certain rate of interest. The rate percent per annum is :

(a)5% (c)10%

(b)8% (d)12%

ANSWER : Option(d)

25. The difference between the interests received from two different banks on Rs.500 for 2 years, is Rs.2.50. The difference between their rates is :

(a)1% (c)2.5%

(b)0.5% (d)0.25%

ANSWER : Option(d)

26. The simple interest on a sum of money is 1/9 of the principal and the number of years is equal to the rate percent per annum. The rate percent per annum is :

(a)3 (c)$3\frac{1}{3}$

(b)1/3 (d)3/10

ANSWER : Option(c)

27. The principal to earn Rs.1,500 simple interest in 6 years @5% p.a. will be : (a)Rs.4,500 (c)Rs.3,000
(b)Rs.5,000 (d)Rs.5,500

ANSWER : Option(b)

28. The simple interest f Rs.8,000 @ an annual rate of 5% for 3 years in :
(a)Rs.1,400 (c)Rs.1,200
(b)Rs.1,600 (d)Rs.1,000

ANSWER : Option(c)

29. Simple interest of Rs.720 at 12½% per annum for $3\frac{1}{3}$ years in :
(a)Rs.245 (c)Rs.315
(b)Rs.524 (d)Rs.274

ANSWER : Option(c)

30. The simple interest on Rs.2000 for $2\frac{1}{3}$ years at the rate of $3\frac{3}{4}$% per annum is :

(a)Rs.170 (c)Rs.182
(b)Rs.175 (d)Rs.190

ANSWER : Option(b)

31. If simple interest of Rs. x at 6 ½% per annum for 2 years is Rs.325, then the value of x is :
(a)Rs.2,350 (c)Rs.2,050
(b)Rs.2,500 (d)Rs.2,305

ANSWER : Option(b)

32. In how many years will a sum of money double itself at, the rate of 10% p.a. ?
(a) 5 years (c)15 years
(b) 10 years (d)20 years

ANSWER : Option(b)

33. Required investment for earning 0f Rs.800 p.m. at 10% p.a. simple interest is : (a)Rs.666.66 (c)Rs.96,000
(b)Rs.1,00,000 (d)Rs.312

ANSWER : Option(c)

34. At what rate of simple interest a sum of Rs.2,600 yields Rs.1,040 after 5 years ? (a)6% (c)8%
(b)6 ½% (d)10%

ANSWER : Option(c)

35. A certain sum of money lent out at 4% p.a. amounts to Rs.896 in 3 years and Rs.960 in 5 years. The sum is :
(a)Rs.600 (c)Rs.750
(b)Rs.700 (d)Rs.800

ANSWER : Option(d)

36. Rs.300 after 5 years at 5% p.a. simple interest amounts to :
(a)Rs.1,200 (c)Rs.325
(b)Rs.375 (d)Rs.360

ANSWER : Option(b)

37. The simple interest on Rs.1,820 from Oct. 9, 1994 to Dec. 21, 1994 at 7½% will be : (a)Rs.22.50 (c)Rs.28.80

(b)Rs.27.30 (d)Rs.29

ANSWER : Option(a)

38. Two equal amounts of money are deposited in two banks, each at 15% per annum, for 3½ years and 5 years. If the difference between their interests is Rs.144, each sum is : (a)Rs.460 (c)Rs.640
(b)Rs.500 (d)Rs.720

ANSWER : Option(c)

39. Due to fall in the rate of interest from 13%
p.a. to 12 ½% p.a., a money lender's yearly income diminishes by Rs.104.
His capital is : (a)Rs.21,400 (c)Rs.22,300
(b)Rs.20,800 (d)Rs.24,000

ANSWER : Option(b)

40. *A* lent Rs.1,200 to *B* for 3 years at certain rate of simple interest and Rs.1000 to *C* for the same time at the same rate. If he gets Rs.50 more from *B* than from *C* , then the rate per cent is :

(a)$10^{1}\frac{}{3}\%$ (c)$8^{1}\frac{}{3}\%$

(b)$6^{2}\frac{}{3}\%$ (d)$9^{2}\frac{}{3}\%$

ANSWER : Option(c)

41. Simple interest on a certain sum at a certain rate is 9/16 of the sum. If the number representing rate percent and time in years be equal, then time is :

(a) $5^{1}\frac{}{2}$ years (c)$6^{1}\frac{}{4}$ years

(b) $6^{1}\frac{}{2}$ years (d)$7^{1}\frac{}{2}$ years

ANSWER : Option(d)

42. A person takes a loan f Rs.200 at 5% simple interest. He returns Rs.100 at the end of 1 year. In order to clear his dues at the end of 2 years, he would pay :

(a)Rs.100 (c)Rs.110

(b)Rs.105 (d)Rs.115.50

ANSWER : Option(d)

43. Find the simple interest on Rs.7,000 at 50/3% for 9 months :

(a)Rs.1,075 (c)Rs.875

(b)Rs.975 (d)Rs.775

ANSWER : Option(c)

44. Find the simple interest on the Rs.2,000 at 25/4% per annum for the period from 4^{th} Feb 2005 to 18^{th} April 2005 :

(a)Rs.25 (c)Rs.35

(b)Rs.30 (d)Rs.40

ANSWER : Option(a)

45. There was simple interest of Rs.4,016.25 on a principal amount at the rate of 9% p.a. in 5 years. Find the principal amount :

(a)Rs.7,925 (c)Rs.7,926

(b)Rs.8,925 (d)Rs.7,925

ANSWER : Option(b)

46. If a sum of money doubles itself in 8 years At simple interest, the rate percent per annum is :

(a)12% (c)13%

(b)12.5 % (d)13.5%

ANSWER : Option(b)

47. A sum of money at simple interest amounts to Rs.815 in 3 years and to Rs.854 in 4 years. The sum is :

(a)Rs.650 (c)Rs.698

(b)Rs.690 (d)Rs.700

ANSWER : Option(c)

48. Find the principal on a certain sum of money at 5% per annum for $2\frac{2}{5}$ years if the amount

being Rs.1,120 ?

(a)Rs.1,000 (c)Rs.1,050

(b)Rs.1,100 (d)Rs.1,200

ANSWER : Option(a)

49. What sum of money will produce Rs.70 as simple interest in 4 years at 3 ½%?

(a)Rs.525 (c)Rs.550

(b)Rs.500 (d)Rs.555

ANSWER : Option(b)

50. At what rate percent on simple interest will Rs.750 amount to Rs.900 in 5 years?

(a)5% (c)4%

(b)3½% (d)5½%

ANSWER : Option(c)

Unit V

MCQ

Choose the correct option of following

Q1 The interest on a sum for 4 years at 5% per annum simple interest is Rs.90, the sum is :

(a) Rs.375 **(b)** Rs. 450 (c) Rs. 1,500 (d) Rs. 1,800

Q2. Simple interest of Rs.1,500 @ 8% for 3 years:

(a) Rs.120 **(b)** Rs. 360 (c) Rs. 1,140 (d) Rs. 1,860

Q3. Rs.300 after 5 years at 5% p.a. simple interest amounts to:
(a) Rs.1,200 **(b)** Rs. 375 (c) Rs. 325 (d) Rs. 360

Q4 The simple interest on Rs.450 at 4% p.a. for 2½ years is:
(a) Rs. 54 (b) Rs.22.50 (c) Rs. 90 **(d)** Rs.45

Q5. What sum will amount to Rs. 2,832 at 6% p.a. rate of simple interest in 3 years:
(a) Rs. 2,000 (b) Rs. 2,200 (c) Rs. 2,300 **(d)** Rs. 2,400

Q6 At what rate percent of simple interest a sum would double itself after 20 years:
(a) 5% (b) 10% (c) 12½% (d) 20%

Q7. A certain sum doubles itself after 8 years on simple interest. What times it will be after 40 years:
(a) 4 Years (b) 5 Years **(c)** 6 Years (d) 7 Years

Q8. The sum of Rs. 600 become Rs.900 after 4 years. The rate of simple interest will be:
(a) 10% (b) 12% (c) 8% **(d)** 12½%

Q8. At what rate of simple interest a sum of Rs. 2,600 yield Rs. 1,040 after 5 years:
(a) 6% (b) 6½% **(c)** 8% (d) 10%

Q9. A certain sum of money lent outs at 4% p.a. amounts to Rs.896 in 3 years and Rs.960 in 5 years. The sum is:
(a) Rs.600 (b) Rs.700 (c) Rs. 750 **(d)** Rs.800

Q10. If the simple interest of Rs 500 for 3 years is Rs. 75 the rate of simple interest will be:
(a) 5% (b) 10% (c) 15% (d) 25%

Q11. Simple interest on Rs. 300 for 7 years at 14% p.a. will be:
(a) Rs.294 (b) Rs.194 (c) Rs. 249 (d) Rs.149

Q12. The principal to earn Rs.1,500 simple interest in 6 years @5% p.a. will be:
(a) Rs.4,500 **(b)** Rs.5,000 (c) Rs. 3,000 (d) Rs.5,500

Q13 The simple interest of Rs. 8,000 @5% p.a. for 3 years is:
(a) Rs.1,400 (b) Rs.1,600 **(c)** Rs. 1,200 (d) Rs.1,000

Q14. Simple interest of Rs.720 at 12½% p.a. for 3½years is:
(a) Rs.245 (b) Rs.524 **(c)** Rs. 315 (d) Rs.274

Q15. The simple interest on Rs.2,000 for 2⅓years at the rate of 3¾% p.a. is
(a) Rs.170 **(b)** Rs.175 (c) Rs. 182 (d) Rs.190

Q16. If simple interest of Rs.x at 6½% per annum for 2 years is Rs.325, then the value of x is:
(a) Rs.2,350 **(b)** Rs.2,500 (c) Rs.2,050 (d) Rs.2,305

Q17. If simple interest of Rs.1,500 @R% for 3 years is Rs.360, then R will be:
(a) 2% (b) 4% (c) 6% **(d)** 8%

Q18. IN how many years will a sum of money double itself at the rate of 10% p.a.:
(a) 5 years **(b)** 10 years (c) 15years (d) 20 years

Q19. Simple interest of Rs. 7,500 @ 8% p.a. for 3 years is:
(a) Rs.1,200 **(b)** Rs. 1,800 (c) Rs. 2,140 (d) Rs. 1,860

Q20. Required investment for earning of Rs.800 p.m. at 10% p.a. simple interest is
(a) Rs. 666.66 (b) Rs. 1,00,000 **(c)** Rs. 96,000 (d) Rs. 312

Q.21 Compound interest on Rs. 400 for one year at 10% p.a. will be:
(a) Rs. 84 (b) Rs. 80 **(c)** Rs. 40 (d) Rs. 42

Q22. Compound interest on Rs. 400 for 2 years at 10% p.a. will be:
(a) Rs. 84 (b) Rs. 80 (c) Rs. 89 (d) Rs. 96

Q23. The compound interest on Rs. 1,000 at 10% p.a. for 2 years will be:

(a) Rs. 2,100 (b) Rs. 21 **(c)** Rs. 210 (d) Rs. 02

Q24. If compound interest is computed quarterly, then the time period becomes:
(a) Twice of the years (b) Half of the years
(c) Four times of the year (d) One-fourth of the years

Q25. If the simple interest on a sum @5% in 3 years is Rs. 150, the compound interest shall be:
(a) Rs. 160 (b) Rs. 162 **(c)** Rs. 157.62 (d) Rs. 155

Q26. If compound interest is computed half yearly, then the time period becomes:
(a) Half of the years (b) Twice of the years
(c) One-fourth of the years (d) Four times of the year

Q27. Rs. 2,000 in 2 years at 4% p.a. compound interest amount to :
(a) Rs.2,160.30 **(b)** Rs.2,163.20 (c) Rs. 2,136.20 (d) Rs. 2,361.20

Q28. The compound interest on Rs.1,600 for 3 years at 5% per annum is:
(a) Rs. 252.20 (b) Rs. 272.20 (c) Rs. 292.20 (d) Rs. 312.20

Q29. If the difference of compound interest and simple interest for 2 years @10% p.a. on certain sum is Rs.128.20. then principal is:
(a) Rs. 1,282 **(b)** Rs. 12,820 (c) Rs. 2,464 (d) Rs. 24,640

Q30. What will be the compound interest of Rs. 10,000 for 9 months at 12% per annum. When interest is compounded quarterly:
2b**(a)** Rs. 927 (b) Rs.1,200 (c) Rs. 1,027 (d) Rs. 900

Q31. The sum of money that amounts to Rs. 9,261 in 3 years at 5% p.a. compound interest is:
(a) Rs. 7,000 **(b)** Rs. 8,000 (c) Rs. 9,000 (d) Rs. 5,000

Q32. The amount of Rs.1,000 @ 4% p.a. compound interest for 3 years is:
(a) Rs. 1,125 (b) Rs. 1,215 (c) Rs. 2,115 (d) Rs. 1,251

Q33. If amount is Rs. 34,300, time 3 years and rate of compound interest is 16⅔%, then principal is
(a) Rs. 21,600 (b) Rs. 2,160 (c) Rs. 26,100 (d) Rs. 26,000

Q34. The amount of Rs. 7,500 at compound interest at 4% p.a. for 2 years is:
(a) Rs. 7,800 (b) Rs. 8,100 **(c)** Rs. 8,112 (d) Rs. 8,082

Q35. Compound interest of Rs.400 at 6% p.a. for 2 years is:
(a) Rs. 48 (b) Rs. 53.92 **(c)** Rs. 49.44 (d) Rs. 449.44

Q36 Compound interest on Rs. 400 for 2 years at 5% p.a. is:
(a) Rs. 40 (b) Rs. 31 **(c)** Rs. 41 (d) Rs. 51

Q37. Compound interest of Rs. 8,000 for 2 years is Rs. 988.80. The rate of compound interest p.a. will be:
(a) 6.18% (b) 5.5% (c) 7.05% **(d)** 6%

Q38. In what time will Rs. 1,100 amount to Rs.2,794 @ 6.6% compound interest per annum
(a) 7 Years (b) 8 Years (c) 12 Years **(d)** 16 Years

Q39. In a suitcase of Rs. 240 is sold for Rs.180, loss percentage is.
(a) 25% (b) 20% (c) 33.33% (d) None of these

Q40. To sell an article for Rs. 90 by purchasing it for Rs. 100 means.
(a) 10% profit **(b)** 10% loss (c) 11.11% profit (d) 11.11% loss

Q41. The selling price of a $4/5^{th}$ of a number of books is equal to the cost price of the whole. The profit percentage is.
(a) 25% (b) 20% (c) 40% (d) 15%

Q42. Selling price equal to

(a) Cost price + loss % (b) Cost price + loss (c) Cost price + profit % **(d)** Cost price + profit

Q43. A man sold a radio for Rs.660, gaining 20%, the purchase price was.
(a) Rs.550 (b) Rs.505 (c) Rs. 440 (d) Rs.404

Q44. A man sold an article for Rs. 88, gaining 1/10 of is cost. The cost price of the article is.
(a) Rs. 85 (b) Rs.84 (c) Rs. 80 (d) Rs. 78

Q45. If the selling price of an article is 4/3 times of its cost price, the profit percent is.
(a) 33.33% (b) 255 (c) 20.67% (d) 33%

Q46. If an article is sold at 5% and 7.5% profit, then difference in selling price is Rs.1.25. Cost price is.
(a) Rs. 50 (b) Rs. 150 (c) Rs. 25 (d) Rs. 125

Q47. A trader sells two cycles for Rs. 1,000 each. On this deal he gains 15% on the first cycle and loses 15% on the other. The total gain or loss percent is.
(a) 2.35% (b) 4.6% (c) 1.5% **(d)** 2.25%

Q48. A General Manager gets commission of 20% on the annual net profit of the business. If the profit of the business stands at Rs. 2,450, his commission is.
(a) Rs. 408 (b) Rs. 203 (c) Rs. 308 (d) Rs. 480

Q49. A shopkeeper fixes the price of his goods 25% above the purchase price and allows a commission 12½% to the agent. His profit percentage is.
(a) 9.375% (b) 3.375% (c) 8.33% (d) 3.125%

Q.50. Manohar quotes 30% more than the cost price on his goods and allows a commission of 10% to the agent. His gain percent is.
(a) 4% (b) 8% (c) 13% **(d)** 17%

Q51. The selling price of a 4/5th of a no. of books is equal to the cost price of the whole. the profit % is :
(a) 25% (b) 20% (c) 40% (d) 15%

Q52. 50- A certain sum of money lend out at 4% p.a. amounts to Rs896 in 3 years and Rs 960 in 5 years . The sum is (in Rs):
(a) 600 (b) 700 (c) 750 (d) 800

Q53. At what rate of simple interest a sum of Rs 2,600 yields Rs1,040 after 5 years ?
(a) 6% (b) 6.5% (c) 8% (d) 10%

Q54. The sum of Rs600 becomes Rs 900 after 4 years . The rate of simple interest will be :
(a) 10% (b) 12% (c) 8% (d) 12.5%

Q55. At what rate percent of simple interest a sum would double itself after 20 years ?
(a) 5% (b) 10% (c) 12.5% (d) 20%

Q56. What sum will amount to Rs 2,832 at 6% p.a. rate of simple interest in 3 years ?
(a) Rs.2,000 (b) Rs.2,200 (c) Rs.2,300 (d) Rs.2,400

Q57. The simple interest on Rs 450 at 4% p.a. for 2.5 years is :
(a) Rs.54 (b) Rs.22.50 (c) Rs.90 (d) Rs.45

Q58. Rs300 after 5 years a 5% p.a. simple interest amount to :
(a) Rs.1,200 (b) Rs.365 (c) Rs.325 (d) Rs.360

Q59. The interest on a sum for four years at 5% per annum is Rs 90 ,the sum is :
(a)Rs.375 (b)Rs.450 (c)Rs.1,140 (d) Rs.1,860

Q60. The formula of simple interest is :
(a) I= P*R*T/100 (b) I=P*R*100/T (c) I=R*100/P*T (d) None of these

Q61. 40- If a seller gains 25 paise on Rs 2 then his percentage of profit is :
(a) 1/8% (b) 3/8% (c)8% (d) 12.5%

Q62. If the profit on cost price of 25%then the profit on selling price is :
(a) 25% (b) 20% (c) 30% (d) 16.67%

Q63. A trader sells two cycles for Rs 1000 each. On this deal the gains 15% on the first cycle and loses 15% on the order . the total gain or loss % is :
(a) 2.35% (b) 4.6% (c) 1.5% (d) 2.25%

Q64. A general manager gets commission of 20% on the annual net profit of the business . if the profit of the business stands at Rs 2,450 his commission is (approximately in integral rupees)
(a) 408 (b) 203 (c) 308 (d) 480

Q65. If an article is sold at 5% and 7.5% profit, then difference is selling price Rs 1.25. cost price is :
(a) Rs.50 (b) Rs.150 (c)Rs.25 (d) Rs.125

Q66. A man sold an article for Rs 88 , 1/10 of his cost . the cost price of the article is:
(a) Rs.85 (b) Rs.84 (c) Rs.80 (d) Rs.78

Q67. A man sold a radio for Rs660, gaining 20% , the purchase price was :
(a) Rs.550 (b) Rs.505 (c) Rs.440 (d) Rs.404

Q68. Selling price is equal to :
(a) cost price + loss % (b) cost price + loss (c) cost price + profit %(d) cost price + profit

Q69. If the simple interest of Rs 500 for 3 years in Rs 75 the rate of simple interest will be :
(a) 5% (b) 10% (c) 15% (d) 25%

Q70. 52- Simple interest on Rs300 for 7 years at 14% p.a. will be :
(a)Rs.294 (b) Rs.194 (c)Rs.249 (d) Rs.149

Q71. The principal who earn Rs1500 simple interest in 6 years at 5% per annum will be:
(a) Rs. 4,500 (b) Rs. 5,000 (c) Rs. 3,000 (d) Rs. 5,500

Q72. 54. The simple interest of 8000 at an annual rate of 5% for 3 years is:
(a) Rs. 1,400 (b) Rs. 1,600 (c) Rs. 1,200 (d) Rs. 1,000

Q73. If simple interest of Rs x at 6.5% per annum for 2 years is Rs325, then the value of x is:
(a) Rs.2,350 (b) Rs.2,500 (c) Rs.2,050 (d) Rs. 2,305

Q74. If simple interest of Rs1500 at R% for 3 years is Rs 360 then R will be:
(a) 2 (b) 4 (c) 6 (d) 8

Q75. In how many years will a sum of money double itself a 10% p.a. ?
(a) 5 years (b) 10 years (c) 15 years (d) 20 years

Q76. Simple interest of Rs7500 at 8% per 3 years is:
(a) 1,200 (b) 1,800 (c) 2,140 (d) 1,680

Q77. Required investment for earning of Rs800 p.m. at 10% p.a. simple interest is Rs:
(a) 666.66 (b) 1,00,000 (c) 96,000 (d) 3,000

Q78. Simple interest of Rs720 at 12.5% p.a. for 3.5 years is:
(a) Rs.245 (b)Rs.524 (c) Rs.315 (d) Rs. 274

Q79. Compound interest on Rs 400 for 1 year at 10%p.a. will be:
(a) Rs.84 (b) Rs.80 (c) Rs.40 (d) Rs.42

Q80. Compound interest Rs 1000 at 10% p.a. for 2 years will be;

(a) Rs 2100 (b) Rs 210 (c) Rs 220 (d) Rs. 21

Q81. If compound interst is computed quarterly, then the time period becomes:

(a) twice of years (b) half of the years (c) one fourth of the years (d)

Q82. If compound interest is compounded half yearly, then the time period becomed:
(a) half of the years (b) twice of the years
(c) one fourth of the years (d) four times of the years

Q83. If the difference of compound interest and simple interest for two years at 10% p.a. on certain sum is Rs. 128.20, then principal is:
(a) Rs 1,282 (b) Rs 12,820 (c) Rs 2,464 (d) Rs 24,640

Q84. What will be the compound interest of Rs 10,000 for 9 months at 12% p.a. , when interest is compounded quarterly?
(a) Rs 927 (b) . Rs 1,200 (c) Rs 1,027 (d) Rs 900

Q85. The sum of money that amounts to Rs9,261 in 3 years at 5% p.a. compound interest is:
(a) Rs7,000 (b) Rs 8,000 (c) Rs 9,000 (d) Rs 5,000

Q86. The amount of Rs1000 at the rate 4% p.a. compound interest for 3 years is :
(a) Rs 1,125 (b) Rs 1,215 (c) Rs 2,115 (d) Rs 1,215

Q87. The amount of Rs 7500 at compound interest at 4% p.a. for 2 years is :
(a) Rs 7,800 (b) Rs 8,100 (c) Rs 8,112 (d) Rs 8,082

Q88. The compound interest on Rs2000 for x years at 10% p.a. is Rs 662, the value of x (in years):
(a) 1 (b) 2 (c) 3 (d) 4

Q89. Compound interest of Rs400 at 6% p.a. for 2 yaers is ;
(a) Rs48 (b) Rs 53.92 (c) Rs 49.44 (d) Rs 449.44

Q90. If nominal rate of interest is 4% p.a. and interest is compounded half yearly, then the effective rate of interest p.a. is;
(a) 4.1% (b) 4.04% (c) 4.4% (d) 4.5%

Q91. Compound interest on Rs400 for 2 years at 5% p.a. is:
(a) RS 40 (b) Rs 31 (c) Rs41 (d) Rs 51

Q92. In what time (years) will Rs 1100 amount to Rs2794 at 6.6% compound interest p.a. ?
(a) 7 (b) 8 (c) 12 (d) 16