S. B. B. Alias APPASAHEB JEDHE ARTS, COMMERCE & SCIENCE COLLEGE, PUNE 02.

TERM END EXAM. 2014 - 2015
SUB - MATHEMATICS AND STATISTICS

F.Y.B.Com.   Time - 2 hrs.

Marks - 60

Q.1 Answer the following multiple choice questions by selecting correct option from the given options (Any 6)   **6**

1) H.C.F. of 35 and 75 is……………
   a) 525   b) 5   c) 10   d) None of these

2) If $X^3 x X^2 = X^a$ then a =……………
   a) 5   b) 6   c) 9   d) None of these

3) $\frac{2}{5} + \frac{3}{4}$ = ……………
   a) $\frac{1}{9}$ b) $\frac{23}{20}$ c) $\frac{7}{20}$ d) None of these

4) If 5: x :: 15 : 75, then x is equal to………………
   a) 10   b) 25   c) 40   d) None of these

5) {1,2,3………} is called a set of……………
   a) Natural Numbers   b) Integers   c) Odd Numbers   d) Whole Numbers

6) Ratio of two numbers is 4:7. The smaller number is 24 then the bigger number is……
   a) 42   b) 28   c) 10   d) None of these

7) 12% of 400 means
   a) 30   b) 48   c) 84   d) None of these

8) L.C.M. of 15 and 85 is……………
   a) 255   b) 5   c) 127   d) None of these

B) Answer the following multiple choice question by selecting correction option from the given options (Any 3)   **6**

1) A person spends 80% of this salary and saves Rs. 800 per month. His monthly salary is Rs……
   a) 6,000   b) 6,400   c) 1,600   d) 3,200

2) A and B started a partnership business by investing Rs. 30,000 and Rs. 50,000 respectively. What will be A's share in the total profit of Rs. 64,000?
   a) 24,000   b) 40,000   c) 10,000   d) 8,000

3) Ankit gets 50,000 as return on investment of Rs. 2,00,000. Find the percentage return on his investment.
   a) 25%   b) 50%   c) 20%   d) 15%

4) Arrange in ascending order $\frac{8}{12}, \frac{18}{24}, \frac{13}{18},$

a) $\frac{8}{12}, \frac{18}{24}, \frac{13}{18}$ b) $\frac{8}{12}, \frac{13}{18}, \frac{18}{24}$ c) $\frac{13}{18}, \frac{18}{24}, \frac{8}{12}$

Q.2 Attempt Answer <u>any two</u> of the following   **8**

1) Two companies have shares of Rs. 12% at 124 and 15% at 150 respectively. Which is the better investment? (F.V. = 100 Rs.)

2) Find th Simple Interest on Rs. 15,000 at 8% p.a. for 5 years.

3) Find the compound Interest on Rs. 30,000 at 10% p.a. for 3 years.

Q.3 Attempt <u>any two</u> of the following   **10**

1) Find EMI on loan of Rs. 1,00,000 to be repaid in equal monthly instalments. Interest is charged 12% p.a. on the loan outstanding at beginning of each month and the time span is 5 years. Given $[(1.01)60 = 1.8199]$

2) At what rate of Simple Interest will the sum of Rs. 5,000 become Rs. 7,000 in 4 years?

3) Ravindra holds 500 shares of Rs. 100 each company declares 12% dividend. Find the dividend received by him.

Q.4 Attempt <u>any two</u> of the following   **10**

1) Define the term Statistics. Explain its scope in Economics.

2) The following is the distribution of height of students in a class.

Height in cm	130-134	135-139	140-144	145-149	150-154
No. of Students	5	15	28	24	17

find :   i) Class mark of 3rd class
         ii) Class boundaries of 5th class
         iii) Class Width of any class
         iv) Class limits of 4th class
         v) Frequency of 1st class

3) From the following frequency distribution find
         i) Less than cumulative frequency
         ii) More than cumulative frequency

Marks	0-10	10-20	20-30	30-40	40-45
No. of Students	5	12	33	14	12

Q.5 Attempt <u>any two</u> of the following   **10**

1) From the following information draw the histogram and find the mode graphically.

Income (per day)	0-100	100-200	200-300	300-400	400-500
No. of workers	10	18	27	10	12

2) Calculate the mean median mode for the following data
102, 58, 86, 109, 95, 112, 125, 55, 80

3) Calculate the mean and mode for the following data

Variable	10	11	12	13	14
Frequency	3	4	5	7	4

Q.6 Attempt <u>any two</u> of the following   **10**

1) Calculate the mean for the following data

Marks	0-20	20-40	40-60	60-80	80-100
No. of Students	1	9	32	16	7

2) Calculate the median and mode for the following data

Monthly salary	1400-1600	1600-1800	1800-2000	2000-2200
No. of Workers	12	30	55	40

3) Explain the method of Stratified Sampling.

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