

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

**TERM END EXAM - 2015 - 2016**

**SUBJECT :- BUSINESS MATHEMATICS AND STATISTICS**

**F.Y. B.Com.**

**Time - 2 hrs.**

**Marks - 60**

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

**6**

- 1) H.C.f. of 26 and 78 is .....  
a) 13                      b) 78                      c) 26                      d) None of these
- 2) If  $5^4 \chi 5^2 = \chi$  then  $\chi^2 =$  .....  
a)  $5^{12}$                       b)  $5^{10}$                       c)  $5^2$                       d) None of these
- 3) Find  $\frac{8}{20} \times \frac{2}{4} =$  .....  
a)  $\frac{2}{5}$                       b)  $\frac{1}{5}$                       c)  $\frac{8}{5}$                       d) None of these
- 4) If  $6 : :: 20 : 100$ , then  $\chi$  is equal to .....  
a) 20                      b) 30                      c) 40                      d) None of these
- 5) L.C.M. of 96 and 192 is .....  
a) 32                      b) 96                      c) 192                      d) None of these
- 6) 18% of 700 is .....  
a) 90                      b) 134                      c) 126                      d) None of these
- 7) The smallest Natural number is .....  
a) Zero                      b) One                      c) Two                      d) None of these
- 8) Soham scored 530 marks out of 700, his percentage is .....  
a) 75                      b) 57                      c) 25                      d) None of these

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

**6**

- 1) Income of A, B and C are in the ratio 2 : 3 : 4 If C gets Rs. 3,800, find the income of A.  
a) 950                      b) 1900                      c) 3800                      d) None of these
- 2) Arrange in ascending order  $\frac{3}{9}, \frac{5}{27}, \frac{8}{18}$   
a)  $\frac{5}{27}, \frac{3}{9}, \frac{8}{18}$     b)  $\frac{8}{18}, \frac{3}{9}, \frac{5}{27}$     c)  $\frac{3}{9}, \frac{8}{18}, \frac{5}{27}$     d) None of these

- 3) Suhas received profit of Rs. 20,000 on his investment of Rs. 3,00,000 find the percentage return on his investment.  
 a) 3.33                      b) 6.66                      c) 7.23                      d) None of these
- 4) The two numbers are in the ratio 7 : 8 and their sum is 195. then that two numbers are  
 a) 91 and 104              b) 90 and 105              c) 89 and 106              d) None of these

**Q.2 Attempt any two of the following.**

**8**

- 1) Find the amount, if Rs. 4500 invested for 2 years at the rate of 12 % p.a. compound interest.
- 2) Shree invested Rs. 8000 in 12 % shares at Rs. 125. How much dividend will he get? (F.V. Rs.100)
- 3) Find the simple interest on Rs. 30,000 at 5 % p.a. for two years.

**Q.3 Attempt any two of the following**

**10**

- 1) A washing machine worth Rs. 20000 is purchased on installment basis under 20 monthly installments. Interest is charged at 18 % p.a. on the outstanding amount at the beginning of each month. Find EMI by monthly reducing balance method. Given  $[(1.015)^{20} = 1.3468]$
- 2) Two companies have shares of Rs. 20 % at 180 or 15 % at 200 respectively. Which is the better investment ? (F.V. Rs. 100)
- 3) In how many years a sum of Rs. 40,000 will amounts to 92000 at the rate of 13 % p.a. simple interest ?

**Q.4 Attempt any two of the following.**

**10**

- 1) Define the terms population & sample.
- 2) The following is the distribution of marks of students in a class.

Marks obtained	0-09	10-19	20-29	30-39	40-49
No. of students	10	25	35	20	10

- Find -
- i) Class boundaries' of 2<sup>nd</sup> class.
  - ii) Class width of any class.
  - iii) Class mark of 4<sup>th</sup> class.
  - iv) Class limits of 3<sup>rd</sup> class.
  - v) Frequency of 5<sup>th</sup> class.

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

Income per day	0-100	100-200	200-300	300-400	400-500
No. of workers	12	28	25	25	10

**Q.5 Attempt any two of the following.**

**10**

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

C.I.	20-40	40-60	60-80	80-100	100-120
F	4	8	16	12	10

- 2) Calculate the mean & median for the following data  
 110, 68, 45, 57, 34, 76, 25

- 3) Calculate the mean for the following data.

Rent per day	100-110	110-120	120-130	130-140	140-150
No. of Tenants	2	5	15	8	5

**Q.6 Attempt any two of the following.**

**10**

- 1) Calculate the mean for the following data.

Monthly Salary	1200	1400	1600	1800	2000
No. of workers	5	10	20	10	5

- 2) Calculate the median for the following data.

CI	0-5	5-10	10-15	15-20	20-25
F	8	12	15	10	5

- 3) Explain the scope of statistics.