33

BUSINESS MATHEMATICS HSSC–I

SECTION – A (Marks 10)

Time allowed: 15 Minutes

Section – A is compulsory. All parts of this section are to be answered on this page and handed over to the Centre Superintendent. Deleting/overwriting is not allowed.

Do not use lead pencil.

حصہ اوّل لازمی ہے۔ اس کے جوابات اسی صفحہ پر دیے گئے مراکز کے حوالے کریں۔ کاٹ کر دوبارہ لکھنے کی اجازت نہیں ہے۔ لیڈ پنسل کا استعمال ممنوع ہے۔

Version No.			
3	1	8	1

0	0	0	0
1	●	1	●
2	2	2	2
●	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	●	8
9	9	9	9

ROLL NUMBER					

0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
3	3	3	3	3	3
4	4	4	4	4	4
5	5	5	5	5	5
6	6	6	6	6	6
7	7	7	7	7	7
8	8	8	8	8	8
9	9	9	9	9	9

Answer Sheet No. _____

ہر سوال کے سامنے دیے گئے، کریکولم کے مطابق درست دائرہ کو پر کریں۔ **Invigilator Sign.** _____

Fill the relevant bubble against each question according to curriculum: **Candidate Sign.** _____

	Question سوال	A	B	C	D	A	B	C	D
1.	150 is 5% of which number?	300	3000	4000	2000	○	○	○	○
2.	If $20:10=30:x$ then the value of x will be?	30	25	20	15	○	○	○	○
3.	What will be the discount on an item with price tag of Rs.300, available at 15%?	15	45	20	30	○	○	○	○
4.	What percent of Rs.300 will be equal to Rs.30?	30%	10%	20%	15%	○	○	○	○
5.	Commission on a deal of Rs.150000 @ $2\frac{1}{2}\%$ will be:	Rs.3750	Rs.375	Rs.37	Rs.37500	○	○	○	○
6.	Which concept is used in calculating monthly installments of a leased car?	Simple interest method	Compound interest method	Sum of annuity	Present value of annuity	○	○	○	○
7.	What will be the order of matrix $[1 \quad 2 \quad 5 \quad 8]$?	4x1	4x4	1x4	1x1	○	○	○	○
8.	Product of matrices $[1 \quad -1 \quad 2]$ and $\begin{bmatrix} -2 \\ 4 \\ 3 \end{bmatrix}$ will be?	$[6]$	$[-2 \quad -4 \quad 6]$	$[0]$	$[-6]$	○	○	○	○
9.	Conversion of $(8)_{10}$ into binary number system results in:	$(100)_2$	$(1000)_2$	$(10)_2$	$(101)_2$	○	○	○	○
10.	What will be the sum of $(101)_2$ and $(100)_2$?	$(1010)_2$	$(1100)_2$	$(1000)_2$	$(1001)_2$	○	○	○	○

34

BUSINESS MATHEMATICS HSSC–I

Time allowed: 2:15 Hours **Total Marks Sections B and C: 40**

NOTE: Answer any eight parts from Section 'B' and any two questions from Section 'C' on the separately provided answer book. Write your answers neatly and legibly.

SECTION – B (Marks 24)

Q. 2 Attempt any EIGHT parts. All parts carry equal marks. **(8 x 3 = 24)**

(i) 60 days food is available for 210 students in a hostel. After 14 days, 20 more students came. For how many days the remaining food will be enough.

(ii) Mr. Assad is a distributor of a fan company. He booked an order of 20 fans @ Rs.850 per fan and agreed to allow 10% trade discount. Find value of invoice.

(iii) Mr. Bilal spends on his clothing Rs.560. This is 8% of his monthly income. What is the monthly income?

(iv) A broker received Rs.16000 by selling a piece of land. His rate of commission was $2\frac{1}{2}\%$. What was the selling price?

(v) A shopkeeper sold an article at 20% more than its cost. What was the selling price, if the cost of the article was Rs.320?

(vi) Three men invested Rs.18000, Rs.12000 and Rs.6000 respectively. How should they share out a profit of Rs.3600?

(vii) Two sums Rs.10000 and Rs.5000 are allowed to grow for a year at the rates of 5% and 10% respectively. Which pays more?

(viii) If $h(u)=\frac{1}{\sqrt{u}}$, then find the values of

(a) $h(25)$ (b) $h\left(\frac{1}{9}\right)$ (c) $h(1-x)$

(ix) If $A=\begin{bmatrix}2 & -4\\ -1 & -2\end{bmatrix}$, then find the multiplicative inverse of A.

(x) If $A=\begin{bmatrix}0 & 2\\ 3 & 5\end{bmatrix}$, then show that $A+A'$ is symmetric.

(xi) Evaluate $(1111)_2 \times (111)_2$

SECTION – C (Marks 16)

Note: Attempt any TWO questions. All questions carry equal marks. **(2 x 8 = 16)**

Q. 3 a. When a number is added to two-third of itself, the result is 45. Find the number. **(04)**

b. Solve the following system of equations by using Cramer's rule **(04)**

$4x = y+13,\ 3x-6=2y$

Q. 4 a. What is the rate of interest if 7500 becomes 9000 in 15 years compounded annually? **(04)**

b. Solve the following expression $(100111)_2+(11110)_2-(10011)_2$ **(04)**

Q. 5 a. Find the future amount of an annuity of Rs.40000 payable at the end of each quarter for 6 years at 8% per annum compounded quarterly.

b. Express $4\begin{bmatrix}1 & 3\\ 1 & 4\end{bmatrix}-\frac{1}{2}\begin{bmatrix}8 & 4\\ 4 & 8\end{bmatrix}$ as a single matrix. **(04)**