

Section -B

The following 20 questions are multiple choice types. Only one of the four alternative given in each is correct. You have to identify the correct answer. Each question is worth **1mark**. You have to give the answer in the **OMR sheet attached with this** and submit it along with your answers to the other question, for evaluation. Please read the instructions given for filling the OMR sheet, carefully, before you start filling your answers. **(Please note that is the format appearing in your Term End Examination.**

1. Which of the following is a rational number?
 - 1) The length of the diagonal of a square with unit side.
 - 2) The area of a circle with radius $\frac{1}{2}$.
 - 3) Cube root of 3
 - 4) The length of the hypotenuse of a right angle triangle with the lengths of the other sides as 3 and 4.

2. $(x + a)(x + b)(x + c)$ is equal to
 - 1) $x^3 + abc$
 - 2) $(x + abc)^3$
 - 3) $x^3 + (a + b + c)x + abc$
 - 4) $x^3 + (a + b + c)x^2 + (ab + bc + ca)x + abc$

3. If a and b are n th and $n + 1$ th fibonacci numbers respectively then $(n + 5)$ th fibonacci number is
 - 1) $3a + 5b$
 - 2) $a + b$
 - 3) $5a + 5b$
 - 4) $a + b + 5$

4. Which one of the following is **not a solution** of the equation $2x - 7y - 4 = 0$?
 - 1) $(\frac{4}{3}, -\frac{4}{3})$
 - 2) $(\frac{7}{2}, \frac{3}{7})$
 - 3) $(\frac{61}{6}, \frac{7}{3})$
 - 4) $(\frac{21}{4}, \frac{3}{2})$

5. If the 19th term of an A.P. is 238 and the common difference is 13, then its first term is
 - 1) 43
 - 2) 4
 - 3) 3.5
 - 4) 30

6. If $C(n,3) = 2C(n,4)$, then n is
- 1) 4
 - 2) 6
 - 3) 5
 - 4) 8
7. Dimension of a tetrahedron is
- 1) 4
 - 2) 5
 - 3) 3
 - 4) 8
8. Which one of the following is not a postulate for geometry?
- 1) For any two points there is exactly one line that contains them.
 - 2) For any three non-collinear points is exactly one plane that contains them.
 - 3) For any pair of parallel lines there is exactly one plane that contains them.
 - 4) For any two points there is a unique positive number which is the distance between them.
9. Sum of the angles of a heptagon is:
- 1) 3560°
 - 2) 900°
 - 3) 1080°
 - 4) 720°
10. A parallelogram has
- 1) rotational symmetry
 - 2) reflection symmetry
 - 3) both rotational and reflection symmetry
 - 4) no symmetry
11. Which one of the following is **not** a conic-section?
- 1) ellipse
 - 2) parabola
 - 3) hyperbola
 - 4) square
12. The area of a rhombus is 180 cm^2 . If one of the diagonal is 12cm long, then the length of the other diagonal (in cm) is

- 1) 15
 - 2) 30
 - 3) 18
 - 4) 25
13. Which one of the following is in the shape of a sphere?
- 1) An orange
 - 2) A football
 - 3) An apple
 - 4) A cricket ball
14. If 6 cubes each of side 3 cm are joined end to end, then the surface area (in cm^2) of the cuboid so formed is
- 1) 200
 - 2) 250
 - 3) 18
 - 4) 240
15. The area of the triangle with vertices $(1, 1)$, $(2, 2)$ and $(-3, 1)$ is
- 1) 1
 - 2) 2
 - 3) 3
 - 4) 4
16. Let P and Q be two points such that their abscissas are equal. Then which of the following is true?
- 1) The line joining P and Q is parallel to the x-axis.
 - 2) The line joining P and Q is parallel to the y-axis.
 - 3) The line joining P and Q passes through the origin.
 - 4) The line joining P and Q makes an angle of 30° with the x-axis and cuts the y-axis at $(0, 4)$
17. The simple interest on ₹4000 at 9.25% per annum in 6 years will be
- 1) ₹2222
 - 2) ₹2220
 - 3) ₹2500
 - 4) ₹2450
18. The mean deviation of the data, 6,5,5,-1,6,3,4,9,8 is
- 1) 2

- 2) 3
- 3) 4
- 4) 5

19. The probability that a randomly chosen two-digit positive integer is a multiple of 3 is

- 1) $\frac{2}{3}$
- 2) $\frac{1}{3}$
- 3) $\frac{2}{5}$
- 4) $\frac{3}{4}$

20. If A, B and C are three independent events and $P(A) = 0.3, P(B) = 0.5$ and $P(C) = 0.8$, then $P(A^c \cup B^c \cup C^c)$ is

- 1) 0.12
- 2) 0.88
- 3) 0
- 4) 0.48

INSTRUCTIONS FOR MARKING IN THE OMR RESPONSE SHEET

1. Use only H.B. pencil for filling the response sheet
2. Mark your answers in the proper column
3. Enter your Enrolment no., year, month, course code and examination code in the respective boxes given for that as shown below. For example if your enrolment number is 071645498, then you need to first write the enrolment number as shown in the box titled enrolment no., given below. Then you have to darken each circle corresponding to each digit appearing in the enrolment number. Suppose, for example, the leftmost digit is 0. So we darken the first 0 in the box. Next digit is 7. Then we select the row containing 7 and darken the '7' in the second column. Similarly you can fill the other digits.

Note that the **Course Code** you have to fill in the OMR sheet is the **computer code** for this course which is **1114**. This is different from the course code given in the programme guide or blocks for this course.

ENROLMENT NUMBER								
0	7	1	6	4	5	4	9	8
●	○	○	○	○	○	○	○	○
①	①	●	①	①	①	①	①	①
②	②	②	②	②	②	②	②	②
③	③	③	③	③	③	③	③	③
④	④	④	④	●	④	●	④	④
⑤	⑤	⑤	⑤	⑤	●	⑤	⑤	⑤
⑥	⑥	⑥	●	⑥	⑥	⑥	⑥	⑥
⑦	●	⑦	⑦	⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧	⑧	⑧	⑧	●
⑨	⑨	⑨	⑨	⑨	⑨	⑨	●	⑨

COURSE CODE			
1	1	1	4
○	○	○	○
●	●	●	①
②	②	②	②
③	③	③	③
④	④	④	●
⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨

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

EXAMINATION CENTRE CODE			
1	2	4	6
○	○	○	○
●	①	①	①
②	●	②	②
③	③	③	③
④	④	●	④
⑤	⑤	⑤	⑤
⑥	⑥	⑥	●
⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨

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

4. For filling the correct choice for the multiple choice questions, do as illustrated in the following example.
Suppose Question 13 is as given below:

Q.No. 13.: Which one of the following is **not** an integer.

- (1) -1 (2) $\sqrt{4}$
 (3) 0.5 (4) 0

Suppose your answer to the question is “0.5” which is given in option no. “3”. Then you have to select the column against no. 13 in the boxes given below and write 3 in the box below “13” and shade the circle numbered 3 in that as shown below. If your answer is such that none of the 4 options are correct, then select 0.

1	2	3	4	5
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4

6	7	8	9	10
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4

11	12	13	14	15
		3		
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	●	3	3
4	4	4	4	4

16	17	18	19	20
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4

OMR Response Sheet
(For writing answers to multiple choice questions)

This page is to be torn off and after filling the relevant boxes attach it along with your answers to other questions in the assignment. **This is to be submitted at the study centre for evaluation.**

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

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

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

EXAMINATION CENTRE CODE			
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

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

ANSWERS TO MULTIPLE CHOICE QUESTIONS

1	2	3	4	5
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4

6	7	8	9	10
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4

11	12	13	14	15
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4

16	17	18	19	20
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4