

# Holiday Homework

CLASS : XII

SUBJECT : MATHS

( RELATIONS AND FUNCTIONS )

## ONE MARK QUESTIONS

1. If  $A$  is the set of students of a school then write, which of following relations are Universal, Empty or neither of the two.

$$R_1 = \{(a, b) : a, b \text{ are ages of students and } |a - b| > 0\}$$

$$R_2 = \{(a, b) : a, b \text{ are weights of students, and } |a - b| < 0\}$$

$$R_3 = \{(a, b) : a, b \text{ are students studying in same class}\}$$

2. Is the relation  $R$  in the set  $A = \{1, 2, 3, 4, 5\}$  defined as

$$R = \{(a, b) : b = a + 1\} \text{ reflexive?}$$

3. If  $R$ , is a relation in set  $N$  given by

$$R = \{(a, b) : a = b - 3, b > 5\},$$

then does element  $(5, 7) \in R$ ?

4. If  $f : \{1, 3\} \rightarrow \{1, 2, 5\}$  and  $g : \{1, 2, 5\} \rightarrow \{1, 2, 3, 4\}$  be given by  $f = \{(1, 2), (3, 5)\}$ ,  $g = \{(1, 3), (2, 3), (5, 1)\}$ , write  $g \circ f$ .

5. Let  $g, f : R \rightarrow R$  be defined by

$$g(x) = \frac{x+2}{3}, f(x) = 3x - 2. \text{ write } f \circ g(x)$$

6. If  $f : R \rightarrow R$  defined by

$$f(x) = \frac{2x-1}{5}$$

be an invertible function, write  $f^{-1}(x)$ .

7. If  $f(x) = \log x$  and  $g(x) = e^x$ . Find  $f \circ g$  and  $g \circ f$ ,  $x > 0$ .
-

8. If  $n(A) = n(B) = 3$ , then how many bijective functions from  $A$  to  $B$  can be formed?
  9. Is  $f: N \rightarrow N$  given by  $f(x) = x^2$ , one-one? Give reason.
  10. If  $f: R \rightarrow A$ , given by  
 $f(x) = x^2 - 2x + 2$  is onto function, find set  $A$ .
  11. If  $f: A \rightarrow B$  is bijective function such that  $n(A) = 10$ , then  $n(B) = ?$
  12. If  $f: R \rightarrow R$  defined by  $f(x) = \frac{x-1}{2}$ , find  $(f \circ f)(x)$
  13.  $R = \{(a, b) : a, b \in N, a \neq b \text{ and } a \text{ divides } b\}$ . Is  $R$  reflexive? Give reason
  14. Is  $f: R \rightarrow R$ , given by  $f(x) = |x - 1|$  one-one? Give reason
  15.  $f: R \rightarrow B$  given by  $f(x) = \sin x$  is onto function, then write set  $B$ .
  16. If  $f(x) = \log \left( \frac{1+x}{1-x} \right)$ , show that  $f \left( \frac{2x}{1+x^2} \right) = 2f(x)$ .
  17. State the reason for the relation  $R$  in the set  $\{1,2,3\}$  given by  $R = \{(1,2), (2,1)\}$  not to be transitive.
  18. If  $R = \{(x,y) : x+2y = 8\}$  is a relation on  $N$ , write the range of  $R$ .
  19. Let  $A = \{0,1,2,3\}$  and define a relation  $R$  on  $A$  as follows:  
 $R = \{(0,0) (0,1) (0,3), (1,0), (1,1), (2,2), (3,0), (3,3)\}$ , Is  $R$  reflexive?  
Symmetric? transitive?
  20. Consider the set  $A = \{1,2,3\}$ . Write the smallest equivalence relation  $R$  on  $A$ .
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## ( INVERSE TRIGONOMETRIC FUNCTIONS)

### ONE MARK QUESTIONS

1. Write the principal value of

(i)  $\sin^{-1}\left(-\frac{\sqrt{3}}{2}\right)$

(ii)  $\cos^{-1}\left(\frac{\sqrt{3}}{2}\right)$

(iii)  $\tan^{-1}\left(-\frac{1}{\sqrt{3}}\right)$

(iv)  $\operatorname{cosec}^{-1}(-2)$

(v)  $\cot^{-1}\left(\frac{1}{\sqrt{3}}\right)$

(vi)  $\sec^{-1}(-2)$ .

2. What is the value of the following functions (using principal value)

(i)  $\tan^{-1}\left(\frac{1}{\sqrt{3}}\right) - \sec^{-1}\left(\frac{2}{\sqrt{3}}\right)$

(ii)  $\sin^{-1}\left(-\frac{1}{2}\right) - \cos^{-1}\left(\frac{\sqrt{3}}{2}\right)$

(iii)  $\tan^{-1}(1) - \cot^{-1}(-1)$

(iv)  $\operatorname{cosec}^{-1}(\sqrt{2}) + \sec^{-1}(\sqrt{2})$

(v)  $\tan^{-1}(1) + \cot^{-1}(1) + \sin^{-1}(1)$ .

(vi)  $\sin^{-1}\left(\sin\frac{4\pi}{5}\right)$

(vii)  $\tan^{-1}\left(\tan\frac{5\pi}{6}\right)$

(viii)  $\operatorname{cosec}^{-1}\left(\operatorname{cosec}\frac{3\pi}{4}\right)$

3. If  $\tan^{-1} x + \tan^{-1} y = \frac{4\pi}{5}$ , find  $\cot^{-1} x + \cot^{-1} y$ .

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4. Find the values of the following

$$(i) \sin \left\{ \frac{\pi}{6} - \sin^{-1} \left( -\frac{\sqrt{3}}{2} \right) \right\} \quad (ii) \tan^{-1} \left( \sin \left( -\frac{\pi}{2} \right) \right)$$

$$(iii) \tan \left( \cos^{-1} \frac{8}{17} \right) \quad (iv) \sin^{-1} \left( \cos \left( \sin^{-1} \frac{\sqrt{3}}{2} \right) \right)$$

5. Evaluate the following

$$(i) \sin (2 \sin^{-1} (0.6)) \quad (ii) \sin (2 \tan^{-1} (0.75))$$

$$(iii) \sin \left( 2 \cos^{-1} \left( -\frac{5}{15} \right) \right) \quad (iv) \tan \left( \frac{1}{2} \cos^{-1} \left( \frac{\sqrt{5}}{3} \right) \right)$$

6. If  $\tan^{-1} x + \tan^{-1} y = \frac{\pi}{4}$ ,  $xy < 1$ , then the value of  $x + y + xy$ .

7. If  $3 \tan^{-1} x + \cot^{-1} x = \pi$ , then find the value of  $x$ .

8. If  $\cos \left( \sin^{-1} \frac{2}{5} + \cos^{-1} x \right) = 0$ , then find the value of  $x$ .

9. If  $\sin^{-1} x + \sin^{-1} y = \frac{\pi}{2}$ , then find the value of  $\cos^{-1} x + \cos^{-1} y$ .

10. If  $\cos^{-1} \alpha + \cos^{-1} \beta + \cos^{-1} \gamma = 3\pi$ , then find the value of  $\alpha(\alpha + \gamma) + \beta(\alpha + \gamma) + \gamma(\alpha + \beta)$ .

11. If  $\tan^{-1} x - \cot^{-1} x = \tan^{-1} \left( \frac{1}{\sqrt{3}} \right)$ , then find the value of  $x$ :

12. Find the value of  $\tan^2 (\sec^{-1} 2) + \cot^2 (\operatorname{cosec}^{-1} 3)$

13. Evaluate  $\sin \{ \cot^{-1} (\cos (\tan^{-1} 1)) \}$

14. If  $a \leq 2 \sin^{-1} x + \cos^{-1} x \leq b$ , then find the value of  $a$  and  $b$ .

15. Solve  $\cos^{-1} (\sin (\cos^{-1} x)) = \frac{\pi}{3}$

16. Write the value of  $\tan \left( 2 \tan^{-1} \frac{1}{5} \right)$

17. Write the value of  $\operatorname{Sec}^{-1} \left( \sec \left( -\frac{8\pi}{5} \right) \right)$

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## ( MATRICES & DETERMINANTS )

### ONE MARK QUESTIONS

1. If  $[1 \ x \ 1] \begin{bmatrix} 1 & 3 & 2 \\ 0 & 5 & 1 \\ 0 & 3 & 2 \end{bmatrix} \begin{bmatrix} x \\ 1 \\ -2 \end{bmatrix} = 0$ , then What is the value of  $x$ ?

2. For what value of  $\lambda$ , the matrix A is a singular matrix where

$$A = \begin{bmatrix} 1 & 3 & \lambda + 2 \\ 2 & 4 & 8 \\ 3 & 5 & 10 \end{bmatrix}$$

3. Find the value of  $A^2$ , if

$$A = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ a & b & -1 \end{bmatrix}$$

4. If  $A = \begin{bmatrix} a & b \\ b & a \end{bmatrix}$  and  $A^2 = \begin{bmatrix} \alpha & \beta \\ \beta & \alpha \end{bmatrix}$ , then find the value of  $\alpha$  and  $\beta$ .

5. If A is a square matrix such that  $A^2 = I$ , then write the value of  $(A - I)^3 + (A + I)^3 - 7A$  in simplest form.

6. Write the value of  $\Delta$ , if

$$\Delta = \begin{vmatrix} x+y & y+z & z+x \\ z & x & y \\ -3 & -3 & -3 \end{vmatrix}$$

7. If  $\begin{bmatrix} x-y & z \\ 2x-y & w \end{bmatrix} = \begin{bmatrix} -1 & 4 \\ 0 & 5 \end{bmatrix}$ , find the value of  $x+y$ .

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8. If  $A$  is a  $3 \times 3$  matrix,  $|A| \neq 0$  and  $|3A| = K|A|$ , then write the value of  $K$ .

9. If  $A = \begin{bmatrix} 4 & x+2 \\ 2x-3 & x+1 \end{bmatrix}$  is a symmetric matrix, then write the value of  $x$ .

10. Matrix  $A = \begin{bmatrix} 0 & 2a & -2 \\ 3 & 1 & 3 \\ 3b & 3 & -1 \end{bmatrix}$  is given to be symmetric, find the value of  $a$  and  $b$ .

11. For any  $2 \times 2$  matrix  $A$ , if  $A(\text{adjoint } A) = \begin{bmatrix} 10 & 0 \\ 0 & 10 \end{bmatrix}$ , then find  $|A|$ .

12. Find  $X$ , if  $A + X = I$ , where

$$A = \begin{bmatrix} 1 & 4 & -1 \\ 3 & 4 & 7 \\ 5 & 1 & 6 \end{bmatrix}$$

13. If  $U = [2 \ -3 \ 4]$ ,  $V = \begin{bmatrix} 3 \\ 2 \\ 1 \end{bmatrix}$ ,  $X = [0 \ 2 \ 3]$  and  $Y = \begin{bmatrix} 2 \\ 2 \\ 4 \end{bmatrix}$ , then find  $UV+XY$ .

14. If  $\begin{bmatrix} 2 & -3 \\ 6 & 5 \end{bmatrix} \begin{bmatrix} 1 & 0 \\ 2 & 3 \end{bmatrix} = \begin{bmatrix} -4 & -9 \\ 16 & 15 \end{bmatrix}$

write the equation after applying elementary column transformation  
 $C_2 \rightarrow C_2 + 2C_1$

15. If  $A = \begin{bmatrix} 2 & 0 & 0 \\ 0 & 2 & 0 \\ 0 & 0 & 2 \end{bmatrix}$ , then find the value of  $A^3$ .

16. Find the value of  $a_{23} + a_{32}$  in the matrix

$$A = [a_{ij}]_{3 \times 3} \text{ where } a_{ij} = \begin{cases} |2i - j| & \text{if } i > j \\ -i + 2j + 3 & \text{if } i < j \end{cases}$$

17. If  $A = \begin{bmatrix} 1 & 0 & 1 \\ 0 & 0 & 0 \\ 1 & 0 & 1 \end{bmatrix}$ , then find  $|A^2|$ .

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18. For what value of  $x$ , is the matrix

$$A = \begin{bmatrix} 0 & 1 & -2 \\ -1 & x & -3 \\ 2 & 3 & 0 \end{bmatrix} \text{ a skew-symmetric matrix}$$

19. If  $A = \begin{bmatrix} \sin 15^\circ & \cos 15^\circ \\ -\sin 75^\circ & \cos 75^\circ \end{bmatrix}$ , then evaluate  $|A|$ .
20. If  $A$  is a square matrix, expressed as  $A = X + Y$  where  $X$  is symmetric and  $Y$  is skew-symmetric, then write the values of  $X$  and  $Y$ .
21. Write a matrix of order  $3 \times 3$  which is both symmetric and skew-symmetric matrix.
22. What positive value of  $x$  makes the following pair of determinants equal?

$$\begin{vmatrix} 2x & 3 \\ 5 & x \end{vmatrix}, \begin{vmatrix} 16 & 3 \\ 5 & 2 \end{vmatrix}$$

23.  $\Delta = \begin{vmatrix} 5 & 3 & 8 \\ 2 & 0 & 1 \\ 1 & 2 & 3 \end{vmatrix}$ , find the value of  $5A_{31} + 3A_{32} + 8A_{33}$ .

24. If  $A = \begin{bmatrix} 2 & 1 \\ 7 & 5 \end{bmatrix}$ , find  $|A (adjA)|$

25. Find the minimum value of  $2 \begin{vmatrix} 1 & 1 & 1 \\ 1 & 1 + \sin\theta & 1 \\ 1 & 1 & 1 + \cos\theta \end{vmatrix}$

26. If  $A$  and  $B$  are square matrices of order 3 and  $|A| = 5$  and  $|B| = 3$ , then find the value of  $|3AB|$ .

27. Evaluate  $\begin{vmatrix} 3 + 2i & -6i \\ 2i & 3 - 2i \end{vmatrix}$ ,  $i = \sqrt{-1}$

28. Without expanding, find the value of  $\begin{vmatrix} \operatorname{cosec}^2\theta & \cot^2\theta & 1 \\ \cot^2\theta & \operatorname{cosec}^2\theta & -1 \\ 42 & 40 & 2 \end{vmatrix}$

29. Using determinants, find the equation of line passing through  $(0, 3)$  and  $(1, 1)$ .
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30. If  $A$  be any square matrix of order  $3 \times 3$  and  $|A| = 5$ , then find the value of  $|adj(adjA)|$
31. What is the number of all possible matrices of order  $2 \times 3$  with each entry 0,1 or 2.
32. Given a square matrix  $A$  of order  $3 \times 3$  such that  $|A|=12$ , find the value of  $|A adj A|$
33. If  $A = \begin{bmatrix} 2 & -1 \\ 3 & 4 \end{bmatrix}$  find  $|(A^{-1})^{-1}|$
34. If  $A = [-1 \ 2 \ 3]$  and  $B = \begin{bmatrix} 3 \\ -4 \\ 0 \end{bmatrix}$  find  $|AB|$
35. Find  $|A (adjoint A)|$  and  $|adjoint A|$ , if  $A = \begin{bmatrix} a & 0 & 0 \\ 0 & a & 0 \\ 0 & 0 & a \end{bmatrix}$

### TWO MARKS QUESTIONS

1. Construct a matrix of order  $2 \times 3$ , whose elements are given by
- (a)  $a_{ij} = \frac{(i-2j)^2}{2}$       (b)  $a_{ij} = \frac{|-2i+j|}{3}$
2. If  $A (x_1, y_1)$ ,  $B (x_2, y_2)$  and  $C (x_3, y_3)$  are vertices of an equilateral triangle with each side equal to  $a$  units, then prove that

$$\begin{bmatrix} x_1 & y_1 & 2 \\ x_2 & y_2 & 2 \\ x_3 & y_3 & 2 \end{bmatrix}^2 = 3a^4$$

3. Prove that the diagonal elements of a skew-symmetric matrix are all zero.
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4. If  $2 \begin{bmatrix} x & 5 \\ 7 & y-3 \end{bmatrix} + \begin{bmatrix} 3 & -4 \\ 1 & 2 \end{bmatrix} = \begin{bmatrix} 7 & 6 \\ 15 & 14 \end{bmatrix}$

Find the value of  $x - y$

5. If A and B are skew symmetric matrices of the same order prove that  $AB + BA$  is symmetric matrix.

6. Without expanding prove that  $\begin{bmatrix} o & p-q & p-r \\ q-p & o & q-r \\ r-p & r-q & o \end{bmatrix} = 0$

7. Let  $A = \begin{bmatrix} 2 & 5 \\ 4 & 6 \end{bmatrix}$  Prove that  $A+A'$  is symmetric matrix.

8. If  $A = \begin{bmatrix} 2 \\ 3 \\ 5 \end{bmatrix}$  and  $B = [1 \ 2 \ 3]$ , Verify  $(AB)' = B'A'$

9. If  $A = \begin{bmatrix} 1 & 0 & -2 \\ 3 & -1 & 0 \\ -2 & 1 & 1 \end{bmatrix}$ ,  $B = \begin{bmatrix} 0 & 5 & -4 \\ -2 & 1 & 3 \\ -1 & 0 & 2 \end{bmatrix}$  and  $C = \begin{bmatrix} 1 & 5 & 2 \\ -1 & 1 & 0 \\ 0 & -1 & 1 \end{bmatrix}$

Find  $AB-AC$ .

10. If  $A = \begin{bmatrix} 1 & 3 \\ 2 & 1 \end{bmatrix}$  Find the determinant of  $A^2-2A$

11. Without expanding, evaluate  $\begin{bmatrix} 265 & 240 & 219 \\ 240 & 225 & 198 \\ 219 & 198 & 181 \end{bmatrix}$

12. If  $D_1 = \begin{vmatrix} a & b & c \\ x & y & z \\ l & m & n \end{vmatrix}$  and  $D_2 = \begin{vmatrix} m & -b & y \\ -l & a & -x \\ n & -c & z \end{vmatrix}$  evaluate  $D_1+D_2$ .

13. If A is a skew symmetric matrix of odd order, then prove that  $|A| = 0$

14. Write the minors and co-factors of each element of the first column of the matrix A

$$A = \begin{bmatrix} 1 & -3 & 2 \\ 4 & -1 & 2 \\ 3 & 5 & 2 \end{bmatrix}$$

15. Find x and y, if  $\begin{bmatrix} 2x+1 & 3y \\ 0 & y^2-5y \end{bmatrix} = \begin{bmatrix} x+3 & y^2+2 \\ 0 & -6 \end{bmatrix}$

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**Class XII**  
**Psychology Assignment**  
**Holidays Homework**

**Note:**

1. Pending class assignments to be completed.
2. Syllabus covered to be revised.
3. Demographic details of the case study participant to be collected and recorded.

***HOLIDAYS ASSIGNMENT***

***Instructions***

- The assignment consist of 3 Parts ,A,B,C.*
- Part A consist 18 learning checks ,one mark each.*
- Part B consist of 6 questions of 2 marks each.*
- Part C consist of 5 questions of 3 marks each.*
- Differences to be written in Paragraph form.*
- All questions are compulsory.*

**PART A:**

**Learning checks ( 1 mark each)**

1. Expand PTSD \_\_\_\_\_
2. DSM stands for \_\_\_\_\_

3. \_\_\_\_\_ is a method in which a person provides factual information about himself/herself.

- a. Interview
- b. Self report measures
- c. Psychological testing.
- d. observation

4. Fear of unfamiliar situations is called \_\_\_\_\_

5. Using Past experience creatively to solve novel problems is known as \_\_\_\_\_

6. Individuals having high motivation, lack of patience and who are always in a hurry are characterised by type \_\_\_\_\_ personality.

7. An individual reporting loss of part or some bodily functions is showing signs of \_\_\_\_\_

- a. Dissociative disorder
- b. panic disorder
- c. Depressive Disorders
- d. Conversion Disorder.

8. Sneha is suffering from severe anxiety but despite that she hesitates to go to a counsellor because she is scared to what others would say . This shows that there is \_\_\_\_\_ attached to Mental health.

- a. Stigma
- b. Magic
- c. Norms
- d. Unwillingness

9. Tendency to put people in the extreme positions is called \_\_\_\_\_ bias.

- a. Halo effect
- b. extreme response bias
- c. social desirability
- d. Acquiescence

10. Define Case Study.

11. IQ of 40 is an indication of \_\_\_\_\_ retardation

- A) mild
- B) moderate
- C) severe
- D) profound

12. Mahima enjoys preparing charts and knowledge organizers for her classes. Identify her intelligence as per Multiple Intelligence. \_\_\_\_\_

13. \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_ play a vital role in shaping a child's about self.

14. Lazarus and Folkman coping resources can be divided into two types of responses namely, \_\_\_\_\_ and \_\_\_\_\_.

15. Match the following

List A	List B
1. WBC	a healthy stress
2. T cells	b leucocytes
3. antigens	c natural killer cells
4. eustress	d viruses

16. The full form for I.C.D.10 is \_\_\_\_\_ and was prepared by \_\_\_\_\_.

17. A difference between phobic disorder and a fear is that the phobic response \_\_\_\_\_

- a. is out of proportion to the actual danger.
- b. involves cognitive as well as behavioral reactions.
- c. is characterized by heart rate.
- d. encourages avoidance of the feared object or situation.

18. Jane's son was recently bitten by a snake. Although she tried to hit the snake with her fist before it reached her son, Jane was unable to prevent it from biting him. Her son is fine, but Jane's hand has become paralyzed. However, multiple examination and testing shows no damage to her hand. What will be her diagnosis?

- a. Psychosomatic disorder.
- b. Conversion Disorder.
- c. Insanity

d. stress

**PART B : 2 Marks**

Q1. Why do Psychologist assess Individual differences.

Q2. State two advantages of observation as a technique.

Q3.Explain the concept of stress resistant Personality.

Q4. Explain the major idea proposed by Carl Rogers.

Q5.Describe the term ‘ Collective Consciousness’.

Q6. Differentiate between

- a. Technological Intelligence and integral intelligence.
- b. fixation and regression
- c. social phobia and agoraphobia
- d. Real self and Ideal Self.

**Part C: 3Marks**

Q1. Explain the Interactional approach to understanding Personality.

Q2. Give two limitations of behavioural Rating Methods.

Q3. ‘Intelligence in the interplay of nature and nurture’. Comment.

Q4. How has intelligence been described in the Indian tradition?

Q5. What is self control or delay of gratification. Discuss any 2 techniques used for self control.

**APEX PUBLIC SCHOOL**  
**SESSION: 2020-2021**  
**CLASS – XII**  
**SUBJECT – IP**

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**PYTHON PANDAS - I**

Q – 1. Explain dataframe. Can it be considered as 1D Array or 2D Array?

Q – 2. What is Numpy Array?

Q – 3. What is python pandas?

Q – 4. Create Date Frame

	Invigilator	Amount
0	Rajesh	550
1	Naveen	550
2	Anil	550
3	Naveen	550
4	Rajesh	550

Q – 5. Create DataFrame

	Name	Subject	Marks	Grade
0	Radhika	IP	98	A1
1	Sonia	CS	87	A2
2	Shaurya	Maths	99	A1
3	Vinay	Phy	87	B

Q – 6. Import pandas as pd

```
Data=[1,2,3,4,5]
```

```
df=pd.DataFrame(Data)
```

```
print(df)
```

What will Print in Output?

Q – 7. What is Series? Explain series using an example.

Q – 8. `a= pd.DataFrame([1,1,1,np.nan],index=['a','b','c','d'], columns=['one'])`.

What is Out put?

Q – 9. Who is the Main Author of Pandas?

Q – 10. Write a Python code to create an empty DataFrame.

Q – 11. Show the output of the following code: -

```
import pandas as pd
import numpy as np
a=np.arange(5,50,3)
print("array")
print(a)
s=pd.Series(a)
print("array converted into series")
print(s)
```

Q – 12. Find the output of the following code: -

```
import pandas as pd
import numpy as np
s=pd.Series(range(5), index=['a','e','i','o','u'], dtype=float)
print("series")
print(s)
print(s[0])
print(s[:3])
print(s[-3:])
```

Q – 13. Create a Series using scalar value and index as [a,b,c,d,e].

Q – 14. Write a program to create a series using array and change the index value & datatype

Q – 15. How to install pandas ?

Q – 16. How to import pandas?

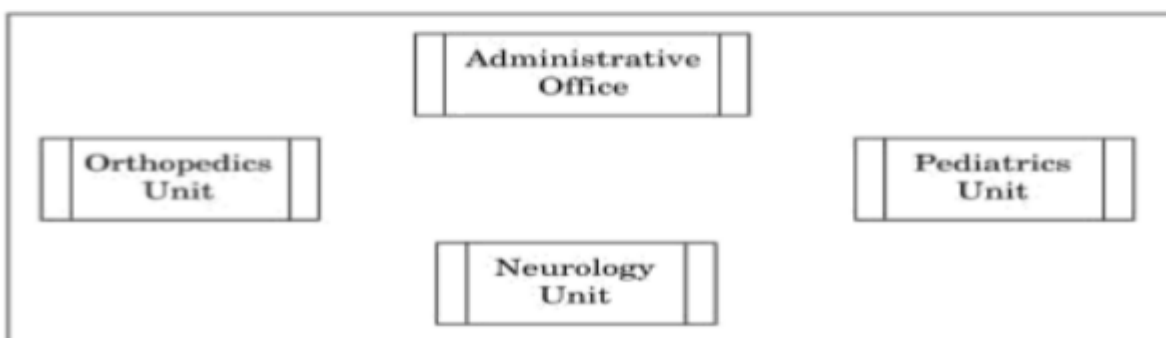
### COMPUTER NETWORK - I

Q – 1. Ayurveda Training Educational Institute is setting up its centre in Hyderabad with four specialised departments for Orthopedics, Neurology and Pediatrics along with an administrative office in separate buildings. The physical distances between these department buildings and the number of computers to be installed in these departments and administrative office are given as follows. You, as a network expert, have to answer the queries as raised by them in (i) to (iv).

Shortest distances between various locations in metres :      Number of Computers installed at various locations are as follows :

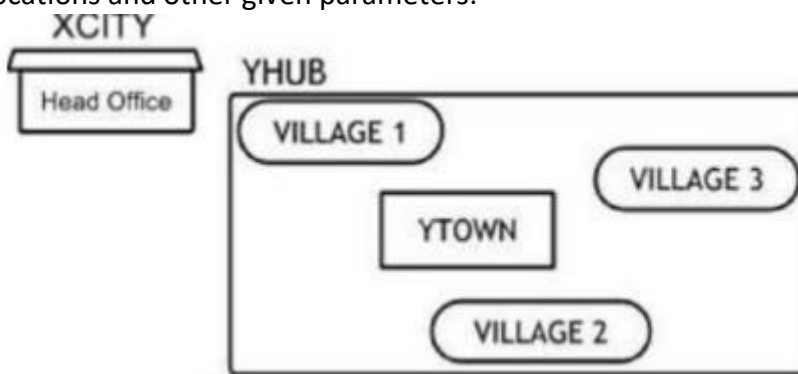
Administrative Office to Orthopedics Unit	55
Neurology Unit to Administrative Office	30
Orthopedics Unit to Neurology Unit	70
Pediatrics Unit to Neurology Unit	50
Pediatrics Unit to Administrative Office	40
Pediatrics Unit to Orthopedics Unit	110

Pediatrics Unit	40
Administrative Office	140
Neurology	50
Orthopedics Unit	80



- i. Suggest the most suitable location to install the main server of this institution to get efficient connectivity.
- ii. Suggest the best cable layout for effective network connectivity of the building having server with all the other buildings
- iii. Suggest the devices to be installed in each of these buildings for connecting computers installed within the building out of the following : Gateway, switch, Modem
- iv. Suggest the topology of the network and network cable for efficiently connecting each computer installed in each of the buildings out of the following : Topologies: Bus Topology, Star Topology  
Network Cable: Single Pair Telephone Cable, Coaxial Cable, Ethernet Cable.

Q2. Intelligent Hub India is a knowledge community aimed to uplift the standard of skills and knowledge in the society. It is planning to setup its training centers in multiple towns and villages pan India with its head offices in the nearest cities. They have created a model of their network with a city, a town and 3 villages as follows. As a network consultant, you have to suggest the best network related solutions for their issues/problems raised in (i) to (iv), keeping in mind the distances between various locations and other given parameters.



Shortest distances between various locations:

VILLAGE 1 to YTOWN	2 KM
VILLAGE 2 to YTOWN	1.5 KM
VILLAGE 3 to YTOWN	3 KM
VILLAGE 1 to YTOWN 2	3.5 KM
VILLAGE 1 to YTOWN 3	4.5 KM
VILLAGE 1 to YTOWN 3	3.5 KM
CITY Head Office to YHUB	30 KM

Number of Computers installed at various locations are as follows:

YTOWN	100
VILLAGE 1	10
VILLAGE 2	15
VILLAGE 3	15
CITY OFFICE	5

In Villages, there are community centers, in which one room has been given as training center to this organization to install computers. The organization has got financial support from the government and top IT companies.

- i. Suggest the most appropriate location of the SERVER in the YHUB (out of the 4 locations), to get the best and effective connectivity. Justify your answer.
- ii. Suggest the best wired medium and draw the cable layout (location to location) to efficiently connect various locations within the YHUB.
- iii. Which hardware device will you suggest to connect all the computers within each location of YHUB?
- iv. Which service/protocol will be most helpful to conduct live interactions of Experts from Head Office and people at YHUB locations? Ans: Videoconferencing OR VoIP



### **Short answer questions**

- Q1. Define network?
- Q2. Differentiate LAN and WAN?
- Q3. Explain the working of client server architecture?
- Q4. Define IoT?
- Q5. List out some examples for IoT devices?
- Q6. Differentiate public and private cloud?
- Q7. What is the unique identification number of NIC card?
- Q8. Define topology?
- Q9. Differentiate switch and gateway?
- Q10. List some advantage of ring topology.

### **NETWORK – II**

Short and long answer Questions

1. Define amplitude?
2. Give example for IP address?
3. List out any four network tools?
4. Which is the protocol used to handle congestion in wireless network?
5. Give eg for connection oriented protocol?
6. Differentiate amplitude modulation and frequency modulation?
7. What are the different types of errors occur when data is transmitted over network? Give example for each.
8. Differentiate IPv4 and IPv6?
9. What are the different wireless connectivity protocols?
10. What happens behind the scenes when you send an email, before it reaches the destination?
11. Differentiate the use of POP and SMTP protocol in email?
12. What is SSL? How does it affect the communication over internet?
13. Define checksum? What are the steps to find out checksum?
14. What type of information is stored in routing table?
15. What measures do wireless networks employ to avoid collision?

### **Data Management (DM-1)**

- Q – 1. Name command to terminate database connection?
- Q – 2. What is Default User name and Password for TESTDB?
- Q – 3. What is Aggregate Function ?
- Q – 4. Name all aggregate functions?
- Q – 5. Will Max() and Min() work on Alphabets?
- Q – 6. Will Sum() and Avg() works on Alphabets ?
- Q – 7. Write difference between Group By Clause and Having Clause ?
- Q – 8. How can you interface python with an SQL database? Explain.
- Q – 9. Consider the following table and give the answer.

TABLE EMP:

Code	Name	Sal
E1	RAJKUMAR	NULL
E2	SUCHITRA	4500
E3	YOGENDRA	NULL
E4	SUSHIL KR	3500
E5	LOVELY	4000

- 1) Select Sum(Sal) from EMP;
- 2) Select Min(Sal) from EMP;
- 3) Select Max(Sal) from EMP;
- 4) Select Count(Sal) from EMP;
- 5) Select Avg(Sal) from EMP;
- 6) Select Count(\*) from EMP;
- 7) Select Count(Code) from EMP;

Q – 10. Consider the CUSTOMERS table having the following records:

ID	NAME	AGE	ADDRESS	SALARY
1	Ramesh	32	Ahmedabad	2000.00
2	Khilan	25	Delhi	1500.00
3	kaushik	23	Kota	2000.00
4	Chaitali	25	Mumbai	6500.00
5	Hardik	27	Bhopal	8500.00
6	Komal	22	MP	4500.00
7	Muffy	24	Indore	10000.00

- 1) Write a command to create a CUSTOMER table.
- 2) Write command to insert rows in a CUSTOMER table.
- 3) Write command to show the structure of the table.
- 4) Write a command to show all the columns of the table.
- 5) Write a SQL query to display all records in ascending order of name.
- 6) Write a SQL query to display all records in descending order of name.
- 7) Write a SQL query to display all records in ascending order of name, descending order of age.
- 8) Write a SQL query to display maximum salary.
- 9) Write a SQL query to display minimum salary.
- 10) Write a SQL query to display total number of records.
- 11) Write a SQL query to display average salary.
- 12) Write a SQL query to display total salary of all the persons.
- 13) Write a SQL query to display name of those persons whose salary is greater than average salary.
- 14) Write a SQL query to display details of those persons whose age is less than average age.

Q – 11. Consider the following tables WORKER and PAYYLEVEL and answer the questions:

Table: WORKER

ECODE	NAME	DESIG	PLEVEL	DOJ	DOB
11	Sachin Patel	Supervisor	P001	13-Sep-2004	23-Aug-1985
12	Chander Nath	Operator	P003	22-Feb-2010	12-Jul-1987
13	Fizza	Operator	P003	14-Jun-2009	14-Oct-1983
15	Ameen Ahmed	Mechanic	P002	21-Aug-2006	13-Mar-1984
18	Sanya	Clerk	P002	19-Dec-2005	09-Jun-1983

Table: PAYLEVEL

PLEVEL	PAY	ALLOWANCE
P001	26000	12000
P002	22000	10000
P003	12000	6000

- 15) To display the details of all WORKERS in descending order of DOB.
  - 16) To display the PLEVEL and number of workers in that PLEVEL.
  - 17) To display the PLEVEL and number of workers in that PLEVEL whose pay is greater than 15000
  - 18) To display NAME and DESIG of those WORKERS, whose PLEVEL is either P001 or P002.
- Give the output of the following SQL queries:
- 19) SELECT COUNT (PLEVEL), PLEVEL FROM WORKER GROUP BY PLEVEL;
  - 20) SELECT MAX (DOB), MIN (DOJ) FROM WORKER;

Q – 12. Consider the tables given below and answer the questions that follow :

Table : Event

EventId	Event	NumPerformers	CelebrityID
101	Birthday	10	C102
102	PromotionParty	20	C103
103	Engagement	12	C102
104	Wedding	15	C104

Table : Celebrity

CelebrityID	Name	Phone	FeeCharged
C101	FaizKhan	99101956	200000
C102	SanjayKumar	893466448	250000
C103	NeeraKhanKapoor	981166568	300000
C104	ReenaBhatia	65877756	100000

- 21) Name the Primary keys in both the tables and Foreign key in 'Event' table. Can NumPerformers (Number for performers) be set as the Primary key ? Give reason.
- 22) How many rows will be present in the Cartesian join of the above mentioned two tables ?  
Write the commands in SQL :
- 23) To display EventId, Event name, Celebrity Id and Names of celebrities for only those events that have more than 10 performers.
- 24) To display Event name, Celebrity Id and Names of celebrities who have "Khan" anywhere in their names.
- 25) To display Event name, Names of celebrities and Fee charged for those celebrities who charge more than 200000.

APEX PUBLIC SCHOOL

ENGLISH

CLASS XII



2020-2021

*NOTHING IS MORE POWERFUL FOR YOUR FUTURE THAN BEING A GATHERER OF GOOD IDEAS AND INFORMATION. THAT'S CALLED DOING YOUR HOMEWORK.*

NOTE: The assignment should be done in the English Notebook.

#### WRITING SECTION

Q1. The entire country has been put under lockdown following the threat of a pandemic due to the Novel corona Virus. The threat of Covid 19 outbreak has forced the Indian government to impose the worst lockdown ever in recorded history. Schools and colleges have been shut indefinitely and educators conducted classes online using video conferencing apps. As a student write a letter to Editor highlighting the various pros & cons of online teaching and suggest at least two ways of making online teaching more effective .

Q 2. You are Adit / Adya. Recently your school organised a workshop on Stress Management for the students of senior classes. There was a discussion on stress related problems of the teenagers and their solutions were discussed. Write a report of the workshop for your school newsletter.

Q3. Read the following advertisement and then write a suitable application along with your bio data .You are Mohit/Mohika of 15, XYZ colony ,Santa Cruz (West) ,Mumbai.

“Wanted a Secretary, preferably a trained lady graduate with 5 years experience and a good command over written and spoken English. Apply within a week to the Personnel Manager Crown International, New Delhi – 29”

Q4. Answer the following questions based on chapters discussed during the online classes in about 150 words.

- a) Will they make them sing in German, even the pigeons? Bring out the theme with evidence from the text.
- b) Do you think the third level existed or was it just a waking dream fulfillment for Charlie ?
- c) How has Kalki used dramatic irony in the story The Tiger King ? Do you agree with ending of the story? Give reasons for your answer.

Q 5. Write the character sketch of the following in 120-150 words:

- a) M Hamel
- b) William O Douglas
- c) Charley



**DEAR STUDENTS ENJOY AND STAY SAFE.**

**TO BE READY FOR TOMORROW'S OPPURTUNITIES DO YOUR HOMEWORK TODAY.  
LEARN, REFINE YOUR SKILLS AND FOCUS ON GROWTH.**

HOLIDAY HOME WORK

CLASS –XII

ACCOUNTANCY

**FUNDAMENTALS OF PARTNERSHIP**

1. Name the method of calculating interest on Drawings of the partners if the different amounts are withdrawn on different dates. 1

OR

When the partner's capital is fixed, where the interest on capital to partners will be recorded?

2. A present the following Profit and Loss Appropriation Account to his partner B for the year ended 31<sup>st</sup> March, 2017

Particulars	Amount	Particulars	Amount
To Salary:		By Profit & Loss A/c	40,200
A           10,000			
B           8,000			
<u>                    </u>	18,000		
To Interest on Capital:			
A           3,000			
B           2,000			
<u>                    </u>	5,000		
To Interest on A's Loan@12%	1200		
To Profit transfer to capital : A--3/4			
12,000	16,000		
B --- 1 / 4			
4,000	40,200		40,200

B feels that he is not fairly treated by A. There is no partnership deed.

You are required to prepare Profit and Loss Appropriation account as per the provision of partnership Act,1932.

3

5. Suresh and Ramesh were Partners in a firm sharing profit and losses in the ratio of 3:2. Their fixed capital were Suresh RS.9, 00,000 and Ramesh RS. 6, 00,000. The partnership deed provide the following:

(i) Interest on Capital @ 5%

(ii) RS. 60,000 p.a. salary to Suresh and salary of RS. 2,000 p.m. to Ramesh.

The profit earned by the firm for the year ended 31<sup>st</sup> March 2018 was RS.234,000. The profit were divided equally without providing for above terms. Pass necessary adjustment entry. 3

6. A, B and C are partners sharing profit in the ratio of 2:2:1 .A drew RS. 5,000 at the beginning of each month, B drew RS. 5,000 at the end of each month and C drew RS. 5,000 at the middle of each month

Interest on drawing is charged at 6% p.a. Determine the amount of interest on drawings if the process is continued for a period of 6 months ending 30<sup>th</sup> September ,2016. Also record necessary journal entry. 3

#### {Change in profit sharing Ratio}

1. Reena ,Sunita and Monu are partners sharing profit and losses in the ratio of 3:2:1 .From 1<sup>st</sup> April ,2015 they decided to share future profits and losses in the ratio of 1:1:1.Calculate sacrifice or gain share of partners.
2. Manoj ,Geet and Pankaj are three partners sharing profit and loss equally. On 1<sup>st</sup> April 2018 , the decided to share future profit and losses in the ratio of 5:3:2. Calculate sacrificing ratio.
3. Ramesh and Jatin are equal partners. They decided to change the profit sharing ratio to 3:2 in future. Calculate sacrifice and gain share.
4. Amar , Beena and Chatnya are partners sharing profit and loss equally. They decides that in future , Chatnya will get 1/5<sup>th</sup> share in profit and remaining will be shared by Amar and Beena equally. On the day of change, Firm's goodwill is valued at 6, 00,000. Give journal entries arising on account of change in profit sharing ratio.

5. Kumar, Gupta and Kavita are partners in a firm sharing profit and losses equally. The firm was engaged in the storage and distribution of canned juice and its godowns were located at three different places in the city. Each godown was being managed individually by Kumar, Gupta and Kavita. Because of increase in Business activities at the godowns managed by Gupta, He had to devote more time. Gupta demanded that his shares in the profit of the firm be increased, to which Kumar and Kavita agreed. The new profit sharing ratio was agreed to be 1:2:1. For this purpose the goodwill of the firm was valued at two years purchase of the average profits of last five years. The profit of last five years were as follows:  
 I: 4,00,000; II: 4,80,000; III: 7,33,000;IV(LOSS) 33,000;V:  
 2,20,000.

You are required to:

- (i) Calculate the goodwill of the firm.
- (ii) Pass necessary journal entries for the treatment of goodwill on change in profit sharing ratio of Kumar, Gupta and Kavita.

6. A, B and C are three partners sharing profit and losses in the ratio of 3:2:1. On 1<sup>st</sup> April 2018 they decided to change the ratio into 1:1:1. The profit and loss account (credit ) balance appears in the books amounting to 30,000.

Record necessary entry if:

- (i) Partners don't want to distribute the R&S.
- (ii) Partners want to distribute the amount of R&S.

7. A, B and C are partners sharing profits in the ratio of 2:2:1. On 1.4.2018 they decided to share the profit in the ratio of 2:1:1. On that date following balances were appearing in the Balance sheet:

	General
Reserve	57,000

	50,000
Deferred Revenue Expenditure	50,000
Debit Balance in Profit & loss A/C	25,000

Without distributing the above items among partners, it was decided to pass an adjustment entry.

8. Joyti ,Amar and Disha are partners sharing profits in the ratio of 2:2:1. They decided to share future profits in the ratio of 3:2:1 with effect from



1<sup>st</sup> April 2018. An extract of their Balance sheet as at 31<sup>st</sup> March 2018 is as under:

Liabilities	Amount	Assets	Amount
Workmen compensation fund	60,000	Investment (at cost)	2,60,000
Investment Fluctuation fund	25,000		

Show the journal entries in the following alternative cases:

- (i) If no adjustment is given.
  - (ii) If claim for compensation is estimated RS. 60,000.
  - (iii) If claim for compensation is admitted RS.20, 000.
  - (iv) IF claim for compensation is admitted RS. 90,000.
  - (v) If market value of investment is RS. 2,20,000.
  - (vi) If market value of assets is RS.3,00,000.
9. Ashok .Bhim and Chetan were partners in a firm sharing profits in the ratio of 3:2:1. Thier Balance Sheet as on 31<sup>st</sup> March 2015 was as follows:

Assets	Amount	Liabilities	Amount
Creditors	1,00,000	Land	1,00,000
Bills payable	40,000	Building	1,00,000
General Reserve	60,000	Plant	2,00,000
Capital Accounts:		Stock	80,000
Ashok 2,00,000		Debtor	60,000
Bhim 1,00,000		Bank	10,000
Chetan <u>50,000</u>	3,50,000		
	5,50,000		5,50,000

Ashok ,Bhim and Chetan decided to share the future profits equally *w.e.f.* 1<sup>st</sup> April ,2015. For this it was agreed that:

- (a) Goodwill of the firm be valued at RS. 3, 00,000.
- (b) Land be revalued at RS. 1, 60,000 and building be depreciated by 6%.
- (c) Creditors of RS. 12,000 were not likely to be claimed and hence to be written off.
- (d) Partners want to show the revised value of Assets and Liabilities in the books.

Prepare Revaluation account, Capital accounts of partners and revised Balance sheet.

### (Admission of a partner)

#### Calculation of new ratio and sacrificing ratio.

1. Anita, Bhavna and Chitra are partners sharing profit and losses in the ratio of 5:3:2. They admit A into partnership and give him  $\frac{1}{5}$ <sup>th</sup> share of profit .Find the new profit –sharing ratio.
2. Akbar and Binoy are partners in a firm sharing profit and losses in the ratio of 7:3.Akbar surrenders  $\frac{2}{10}$ <sup>th</sup> from his share and Binoy surrenders  $\frac{1}{10}$ <sup>th</sup> from his share in favour of Chetna ; the new partner .Calculate new profit –sharing ratio and Sacrificing ratio .
3. Priya and Geeta were partners sharing profits in the ratio of 3:2.They admitted Poonam as a new partner. Priya gives  $\frac{1}{4}$ <sup>th</sup> of her share and Geeta gives  $\frac{1}{5}$ <sup>th</sup> of her share to new partner.  
Calculate new profit sharing ratio and sacrificing ratio.
4. Amber and Bhuvan are sharing profit and losses in the ratio of 3:2 .They admit Chahat for  $\frac{1}{5}$ <sup>th</sup> share in the profit .Chahat acquire  $\frac{1}{5}$ <sup>th</sup> of her share from Amber and  $\frac{4}{5}$ <sup>th</sup> share from Bhuvan. Calculate new profit sharing Ratio.

5. Saleem ,Rijwan and Omer are partners in the ratio of 3:2:1.Wahid joins the firm as a new partner for  $\frac{1}{6}$ <sup>th</sup> share in the profit. Omer would retain his original share. Find new ratio.

### Treatment of Goodwill

6. Shraya and Antra are partners in a firm sharing profit and losses equally. They admit Somya as a new partner for  $\frac{1}{5}$ <sup>th</sup> .The goodwill account appear in the books as its full value RS. 15,000. Somya is to pay proportionate amount of goodwill which she pays to Shreya and Antra privately.
7. Amrit and Paras are partners in a firm sharing profit and losses in the ratio of 3:2. A new partner Aman is admitted.Amrit surrender  $\frac{1}{5}$ <sup>th</sup> of his share and Paras surrenders  $\frac{2}{5}$ <sup>th</sup> of his share in favour of Aman. For the purpose of Aman admission the goodwill of the firm is valued at RS. 75,000 and Aman brings in his share of goodwill in cash which is withdrawn by the partners.  
Pass necessary journal entries.
8. Arvind and Parth are partners sharing profit in the ratio of 3:2 .Their books show goodwill at RS.2, 000. Nikhil is admitted with  $\frac{1}{4}$ <sup>th</sup> share of profit and brings in RS. 10,000 as his capital but is not able to bring in cash for his share of goodwill RS. 3,000. Draft Journal entries.
9. Pooran and Divesh are partners sharing profit and losses in the ratio of 3:2.They admit Rajesh for  $\frac{1}{4}$ <sup>th</sup> share in profit which he takes  $\frac{1}{6}$ <sup>th</sup> from Pooran amd  $\frac{1}{12}$ <sup>th</sup> from Divesh. Rajesh brings in only RS. 60,000 of his share of goodwill out of RS. 1, 00,000. Pass journal entries to record this arrangement.
- 10.Ragav and Ronit are partners in a firm sharing profits in the ratio of 3:2 .On 1st April 18 ,they admit Ritik as new partner for  $\frac{1}{4}$ <sup>th</sup> share in the profit. Ritik contribute following assets towards his share of capital and goodwill:  
Stock RS.60, 000; Debtors RS.90,000; Land and Building RS. 1, 00,000; Plant and machinery RS.40, 000. On that date of admission of Ritik, The goodwill of the firm was valued at RS. 6, 00,000,

Pass necessary journal entries in the books of the firm on Ritik 's admission.

11. Anil and Sunil are partners in the firm with fixed capital of RS. 3,00,000 and 2,00,000 respectively. The admitted Rina as a new Partner for 1/4<sup>th</sup> share in the profits of the firm on 1st April 2018. Rina brought RS.3, 00,000 as her share of capital. The profit and loss account shows a credit balance of 50,000. Calculate value of goodwill and record necessary journal entries.

12. Mohit and Ramesh share profit in the ratio of 5:3. Their balance Sheet as at 31st March, 2018 was:

Assets		Amount	Liabilities		Amount
Creditors		15,000	Cash at bank		5,000
Employees Provident Fund		10,000	Sundry Debtors	20,000	
Workmen Compensation Reserve		5,800	Less: Provision for Doubtful debts	<u>600</u>	19,400
Capital A/cs			Stock		25,000
Mohit	70,000		Fixed Assets		80,000
Ramesh	<u>31,000</u>	1,01,000	Profit & Loss A/C		2,400
		1,31,800			1,31,800

They admit Prakash into partnership with 1/8<sup>th</sup> share in profit on this date. Prakash brings RS. 20,000 as his capital and RS. 12,000 for goodwill in cash. Prakash acquires his share entirely from Mohit. Following revaluation are also made:

- Employees provident fund liability is to be increased by RS. 5,000.
- All Debtors are good. Therefore, no provision is required on Debtors.
- Stock includes RS.3,000 for obsolete items.
- Creditors are to be paid RS.1,000 more.

(e) Fixed assets are to be revalued at RS. 70,000. Prepare necessary Journal entries, necessary accounts and new Balance sheet. Calculate new profit sharing ratio also.

13. A and B were partners in a firm sharing profit in the ratio in 3:1 ratio. They admitted C as a partner for 1/4<sup>th</sup> share in the future profit. C was to bring 60,000 for his capital. The balance sheet of A and B as at 1<sup>st</sup> April 2018 the date on which C was admitted ,

Liabilities		Amount	Assets		Amount
<b>Capital</b>			<b>Land and Building</b>		<b>40,000</b>
<b>A</b>	<b>50,000</b>		<b>Plant and Machinery</b>		<b>70,000</b>
<b>B</b>	<b>80,000</b>		<b>Stock</b>		<b>30,000</b>
	-----	<b>1,30,000</b>	<b>Debtor</b>		
<b>General Reserve</b>		<b>10,000</b>	<b>35,000</b>		
<b>Creditors</b>		<b>70,000</b>	<b>Less: Provision for</b>		<b>34,000</b>
			<b>Doubtful debts</b>		
			<b><u>1,000</u></b>		
			<b>Investments</b>		<b>26,000</b>
			<b>Cash</b>		<b>10,000</b>
		<b>2,10,000</b>			<b>2,10,000</b>

The other terms agreed upon were:

- (a) Goodwill of the firm was valued at 24,000.
- (b) Land and building were valued at 65,000 and plant and Machinery 60,000.
- (c) Provision for Doubtful Debts was found in excess by 400.
- (d) A liability of 1,200 included in sundry Creditors was not likely to arise.
- (e) The capital of the partners be adjusted on the basis of C's contribution of capital of the firm.

**(f) Excess and shortfall, if any, be transferred to current accounts of partners.**

**Or**

**By bringing in or withdrawing cash, the capital of A and B would be adjusted.**

# Business Studies

## CH- 1 Nature and Significance of management

- Q1. At times, a business may concentrate more on producing goods with fewer resources *i.e.*, cutting down cost but not achieving the target production. Consequently, the goods do not reach the market and hence the demand for them declines and competitors enter the market. Which aspect of management was ignored in this situation?
- (a) Efficiency      (b) Effectiveness      (c) Productivity      (d) Co-ordination
- Q2. Dishaa at Frameworks Ltd., performs several different tasks in a single day. Some days she may spend more time in planning a future exhibition and on another day she may spend time in sorting out an employee's problem. The task of a manager consists of an ongoing series of functions. Which aspect of management is highlighted here?
- (a) Management is a continuous process.  
(b) Management is multi-dimensional.  
(c) Management is a pervasive process.  
(d) Management is an intangible process.
- Q3. McDonalds, the fast food giant made major changes in its menu to be able to survive in the Indian market. Which feature of management is highlighted here:
- (a) Management is a continuous process.  
(b) Management is multi-dimensional.  
(c) Management is a pervasive process.  
(d) Management is an intangible process.
- Q4. Organisations are made up of people who have different personalities, backgrounds, experiences and objectives. They all become part of the organisation to satisfy their diverse needs. Which objective of management is highlighted in aforesaid statement:
- (a) Organisational objective      (b) Social objective  
(c) Personal objective      (d) None of these
- Q5. A business needs to add to its prospects in the long run, for this it is important for the business to grow. Which objective of management is highlighted in aforesaid statement:
- (a) Organisational objective      (b) Social objective  
(c) Personal objective      (d) None of these
- Q6. Every organisation whether it is business or non-business, has an obligation to fulfill. This refers to consistently creating economic value for various constituents of society. Which objective of management is highlighted in aforesaid statement:
- (a) Organisational objective      (b) Social objective  
(c) Personal objective      (d) None of these
-

Q7.

Hero Limited's target is to produce 10,000 shirts per month at a cost of ₹ 150 per shirt. The production manager could achieve this target at a cost of ₹ 160 per shirt. Do you think the production manager is effective?

Give reasons in support of your answer.

**(1 Mark) [CBSE, OD 2010]**

Q8.

Your grandfather has retired as the director of a manufacturing company. At which level of management was he working? Different type of functions are performed at this levels. State one function.

**(1 Mark) [CBSE, DELHI 2011]**

Q9.

Das is the Managing Director of 'Gamut Ltd.', manufacturing different varieties of cheese. He has an efficient team working under him consisting of Rajat – the Production Manager. Vinay – the Marketing Manager and Adit – the Finance Manager. They understand and interpret the policies made by Das, ensure that their departments have adequate manpower, assign them the necessary duties and motivate them to achieve the desired objectives.

State one more function other than those mentioned above, that this team may perform at the level they are working.

**(1 Mark) [CBSE, OD 2019]**

Q10

Hema is one of the most successful managers of her company, 'Kobe Ltd'. She uses her creativity and initiative in handling challenging situations at work. The knowledge gained by her during her student days at a renowned management institute as well as through her observation and experience over the years is applied by Hema in a skillful manner in the context of the realities of a given situation. She often reads books and other literature in various fields of management to keep her knowledge updated.

(a) An aspect of the nature of management is being highlighted in the above description. Identify the aspect.

(b) Explain any three features of the aspect identified in part (a).

**(4 Marks) [CBSE, DELHI COMPTT. 2017]**

Q11.

Kamal, Khan and Devid are partners in a firm engaged in the distribution of dairy products in Madhya Pradesh. Kamal is a holder of Senior Secondary School Certificate from Central Board of Secondary Education with Business Studies as one of his elective subjects. Khan had done his post-graduation in Hindi literature and Devid in Dairy Farming. One day there was a serious discussion between Khan and Devid regarding the nature of 'Management as a Science'. Khan argued that Management was not a science whereas Devid was of the opinion that Management was a science. Kamal intervened and corrected both Khan and Devid about the nature of Management as a Science with the help of his knowledge of Business Studies.

Explain how Kamal would have been able to satisfy both Khan and Devid.

**(5 Marks) [CBSE, OD COMPTT. 2015]**



Q12.

Narayana Computers Ltd. is a leading company in Computer Technology and IT services. The Chief Executive Officer of the company attributes the success of the company to its managerial team spirit, which have helped to handle rapid changes in technologies and to transform threats into opportunities. Like any other business enterprise profits are

important for survival and growth of Narayana Computers Ltd. The management of the company believes that a satisfied employee creates a satisfied customer, who in turn creates profits that leads to satisfied shareholders. The company has a strong sense of social responsibility. It has set up many educational institutions in the field of management, engineering and computer education, in which half of the students are girls.

On the basis of the given information about Narayana Computers Ltd. answer the following questions:

- (a) Identify and explain the objectives of the company discussed in the above para. Also quote the lines for the identified objectives.
- (b) Identify any two values which the company is trying to communicate to the society.

**(5 Marks) [CBSE, OD COMPTT. 2016]**

Q13.

GenX Fashions is planning to launch casual wearline for college students in a year's time to extend its product line. At present the company has reduced the prices of its formal wear by 10% to retain its existing market share.

Giving suitable reasons, identify the objectives of management which GenX Fashions is fulfilling by undertaking such activities.

**(3 Marks)**

Q14.

After every three months, Mr. Peter, sales manager, offers new trade promotion schemes to its distributors. He plans to introduce new varieties of products keeping in mind the needs of a customer and promotional schemes from his competitors. This gives him an added advantage over his competitors.

Identify which characteristics of management is reflected in above situation? Explain it briefly.

**(3 Marks)**

- Q15. Giving suitable reason identify in following situations whether the manager is effective, efficient, both or neither.
- (a) Mr. Allen drafted a well documented and factual report on the financial performance of the company but he could not present it in the board meeting as he could not complete it on time.
  - (b) Mr. Albert of Fast couriers assured to deliver an urgent consignment of its regular customer Mr. Alex on 5 April, 2019 and charged extra money from Mr. Alex. But the consignment was delivered on 7 April, 2019. **(4 Marks)**

- Q16. In Uflex Ltd., the purchase department purchased 200 tonnes of flex sheet for production of flex hoardings ignoring the requisition of 150 tonnes placed by production department. As a result, there was overproduction of flex hoardings. The extra hoardings were not accepted by sales department, consequently extra hoardings remained unsold. On the basis of the given information about Uflex Ltd. answer the following questions:
- (a) Identify the aspect of management which is lacking in the above situation?
  - (b) Explain the situations when need for this aspect of management arises. **(4 Marks)**

- Q17. Hazel has been working on the position of senior financial executive in Century Plywood Ltd. On the basis of her performance and dedication, the managing director of the company decided to promote her to the position of finance manager of the company. On the basis of the given information, answer the following questions:
- (a) Identify the level of management at which she will be working henceforth.
  - (b) State any three functions that Hazel will perform at this level. **(4 Marks)**

- Q18. Kitchening Enterprises, are producers of hand operated grinders. Now with a lot of women in the society going out for jobs there is a greater demand for a product which is more efficient and works at a great speed. On realising this change, the company decided to enter into the market for producing electronically operated mixers and grinders and food processors.

Q19

For Proctor and Gamble (P&G), producers of vicks; purpose, values and principles are the foundation for P&G's unique culture. Throughout its history of over 170 years, business has grown and changed while these elements have endured, and will continue to be passed down to generations of P&G people to come.

Company's purpose unifies personnel in a common cause and growth strategy of improving more consumers' lives in small but meaningful ways each day. It inspires P&G people to make a positive contribution every day. P&G brands and P&G people are the foundation of P&G's success.

P&G people bring the values to life as company focus on improving, the lives of the world's consumers. P&G always tries to do the right things with the aim of earning the gains coupled enhancement in goodwill and customer satisfaction.

On the basis of the given information about Proctor and Gamble Ltd. answer the following question:

Identify the main objectives of the company discussed in the above case. Also quote the lines for the identified objective. **(4 Marks)**

Q20

Prime Minister of India, launched the Swaach Bharat Abhiyan and urged all the citizens and business organisations to actively support it. Keeping this in mind, Armour Helmets Pvt. Ltd. decided to contribute by installing 500 dustbins in and around major markets of the city.

Q21.

Management at Stella Ltd., took steps to modernise their plants, keeping in tune with the latest technological developments in the environment. To ensure that workers do not feel out of place with the new technology, proper training facilities are arranged for them. They are thus able to pick up the required skills and are rather happy with the new and improved machines. Workers are encouraged to share their feedback, suggestions, complaints and grievances, if any. This motivates the employees to put in their best for goal achievement of the organisation. The company is also able to supply good quality goods to the members of the society.

Identify and explain the importance of management highlighted in the above case.

**(4 Marks)**

# Ch-3 Business Environment

Q. 1. Mr. Ajay after completing MBA from USA comes to India to start a new business under the banner Ecom Creations Ltd. He launches a new product in an e-learning for senior Secondary School students in Commerce stream, which already has an established market in UK and USA but not in India. His business starts flourishing in India. Now more Indian companies entered into the market with other subjects also.

Identify and quote the lines from above para which highlight the significance of understanding business environment.

Q. 2. Just after declaration of Lok Sabha Elections 2014 results, the Bombay stock exchange's price index (Sensex) rose by 1000 points in a day. Identify the environmental factor which led to this rise giving reason. Also explain any two other dimensions of business environment.

Q. 3. The court passed an order that all schools must have water purifier for the school children as

1. Society in general is more concerned about quality of life.
2. Innovative techniques are being developed to manufacture water purifier at competitive rates.
3. Incomes are rising and children at home are also drinking purified water.

The government is also showing positive attitude towards the water purifier business.

Identify the different dimensions of business environment by quoting from the above details.

## Question 4:

A company is a component of market. It utilises various raw materials, labour force, human resources, power, water, other sources, etc. When all these resources are utilized output is produced. But before output is produced the input has to go through various operations. These operations convert the raw materials into final products which are then sold in the market.

In the above paragraph which importance of Business Environment is highlighted?

### Question 5:

The market is flooded with better quality toys of foreign origin. The result is fall in revenue of the indigenous or local companies as their products are much inferior and are also costlier in less demand in the market.

Which dimension of Business Environment can be seen here affecting the local companies' revenue? 1

### Question 6:

The sale of sarees increases in the months of the year when a large number of marriages take place in India. The saree manufacturing companies make special plans of sale for these months.

Which dimension of business environment comes into picture here?

### Question 7:

We can expect high sale of sarees in India but we can't expect the same in Which feature of business environment is discussed in the previous line?

### Q8

**Q. 1 . Kapil Sharma is working as the Country Head of a company which owns a chain of malls under the name of 'Virtuoso' in the various parts of India. Through an analysis report of the business environment, it has been brought to his notice that in the coming years, shopping at a mall will not be a necessity for the buyers as purchases can be made online from anywhere and at any time with ease and at the consumer's convenience. Hence, malls will have to provide much more than shopping to be able to attract customers. So, he recommends that 'Virtuoso' malls should to be restructured into recreation centers, offering more spaces to socialize, host events and concerts, and provide ample Food and Beverages options.**

**Consequently the share of entertainment segment and Beverages segment in the overall mall space is increased by 20%. As a result, the company gains enormously by getting the first mover advantage.**

**In context of the above case:**

- 1. Define the term 'Business Environment'.**
- 2. Explain the terms 'Threats' and 'Opportunities' by quoting lines from the paragraph.**

### Question 9:

Long Drive Manufacturers is a leading vehicle manufacturing company. It claims that it can create a fuel in its laboratory which can run the newly designed car. The company is ready to provide this fuel to its customers for free for one year provided they buy the car.

Which dimension of business environment is affected here by the company's innovative solution? 1

### Question 10:

Identify the various dimensions of business environment:

- 1 1. With the election of a new government the sensex drops by 748 points.
- 2 2. A particular channel refrains from showing the advertisement of a particular product as it is banned
- 3 by the government.
- 3 3. A software is in high demand among the industrial buyers as it can connect all the branches of a
- 4 company as a single integrated unit.
- 4 4. At the time of holi a large number of manufacturing firms get involved in making colours which are
- 5 used in the celebration of this colourful festival.
- 5 5. It is not advisable to open a luxury car showroom in the middle of an economy where per capita
- 6 income is very low.

6 **The bags are creating many environmental problems which affect the life of people in general.**

7 **Society in general is more concerned about quality of life.**

8 **The Government decided to give subsidy to jute industry to promote this business.**

9 **Innovative techniques are being developed to manufacture jute bags at low rates.**

**Incomes are rising and people can afford to buy these bags.**

**Identify the different dimensions of Business Environment by quoting the lines from the above particulars.**

**Question11**

GHJ Private Ltd. is concerned about the external environment of business. It is busy analyzing various factors which are going to affect its business. However with a lot of understanding it developed about the business it found two types of factors; one which affected the firm directly and the other which affected all the firms in the business. With the passage of time the challenges for the company have increased. The company finds new competitors and technological challenges which are posing new changes for it. The company at the end of the year decides to have a survey. This survey is about knowing the business environment properly. Even after spending a lot of money on the surveys the company comes to conclusion that it's not easy to understand the business environment and it is properly understood only in parts. The company is ready to seek advice from experts and is eager to notice changes in the business environment. When a multinational company enters the market the company is eager in taking preventive measures like improving the product, aggressive advertising, etc. A special team of experts have been created. The team observes the changes taking place like changing branding loyalty, more demanding customers, etc. as it knows the pace of change is more important than the change itself. The painstaking efforts of the company don't go unrewarded. The company by the end of the year makes huge profit and by understanding the business environment is able to increase its revenue.

Which features of business environment have been highlighted in the above case? Also identify the various importance of business environment highlighted above.

**Question 12**

ABCDEF Ltd. decided to start its new venture in Delhi. For this they needed to understand the Business Environment of the area. It was realised by the company that the Business Environment of Delhi was very hard to understand unless and until it was divided into different business dimensions like legal, political, economic, social and technological conditions. After understanding the business situations the company started to study the close links between different elements of the Business Environment. They

gave a proper shape to their research and the business got started with full force. Later they realised that the products they were selling in Delhi were more fit for the European culture and decided to start a new branch in Belgium where the demand of their products was very high from the first day. The company came to be recognized and in few years became a global brand. The reason for its success in different countries was the adaptability it showed in meeting the changing environment. The company kept track of all happenings and did a periodic survey of the choices of the customers. It recognized that there was no surety in the nature of market and it was very unpredictable.

Which features of Business Environment have been highlighted in the above case? Identify the lines which highlight these features.





# Holiday Homework

**Class: XII (H + C)**

**Subject: Economics**

Project on the following topic according to roll no:

<b>Topics</b>	<b>Students (Roll no wise)</b>
1. Government Budget and its component	Roll No 1 to 7
2. Role of RBI in control of credit	Roll No 8 to 14
3. Digital India – steps towards the future	Roll No 15 to 21
4. Make in India - the way ahead	Roll No 22 to 29
5. Micro and small scale Industries	Roll No 30 to Last