St. Mary's School, Dwarka
Holiday Homework
Class: XII
Worksheet 2

General Instructions:

1) The work should be done neatly and systematically.

2) The given questions are to be done in your respective subject notebooks.

3) Attempt all questions.

Subject: English Core

No. of questions: 10   M.M. 25

I Read the passage carefully.   (4)

In modern democratic societies, the concept of governance is deeply rooted in the principle of popular sovereignty. This fundamental idea suggests that legitimate political authority emerges from the collective will of the people, rather than from divine right or hereditary succession. The democratic framework is predicated on several indispensable elements that work in concert to ensure effective governance and protect citizens' rights.

At its core, democracy requires robust institutions that facilitate citizen participation in the political process. These institutions serve as channels through which people can voice their opinions, participate in decision-making, and hold their representatives accountable. Whether through voting, public discourse, or civic engagement, these mechanisms ensure that government remains responsive to the needs and desires of its constituents.

Constitutional supremacy stands as another cornerstone of democratic governance. The constitution, serving as the supreme law of the land, establishes clear boundaries for governmental power and protects fundamental rights. This legal framework ensures that no individual or institution can exercise unlimited authority, thereby preventing the emergence of autocratic rule.

Modern democracies thrive on their heterogeneous nature, embracing diverse perspectives, beliefs, and ideologies. This multiplicity of viewpoints enriches public discourse and leads to more comprehensive policy solutions. Rather than enforcing uniformity, successful democracies create spaces where different voices can coexist and contribute to the collective decision-making process.

For democracy to function effectively, it requires active citizen participation, strong institutions, respect for constitutional principles, and the protection of minority rights. These elements work together to create a system where power truly resides with the people, and government serves as an instrument of their collective will rather than as a force that dominates them.

Q1. In the context of the passage, the term "popular sovereignty" implies: **1**
A. supremacy of the government over the people
B. power of elected officials to rule without public input
C. legitimacy of political authority deriving from the collective will of the people
D. limitation of individual rights to maintain order

Q2. According to the passage, which of the following is *most essential* for the functioning of democracy?   **1**
A. A centralized form of governance
B. Robust institutions for citizen participation
C. The absolute power of the executive
D. A uniform set of ideologies and perspective

Q3. The phrase "democratic framework is predicated on several indispensable elements" implies that Democracy/Democracy's: **1**
A. is based on a few unnecessary principles
B. can exist without any governing principles
C. success is irrelevant to its foundational principles
D. cannot function without certain foundational principles

Q4. What does the phrase "constitutional supremacy" suggest about the role of the constitution in a democracy?   **1**
A. acts as a superior law that restrains government power
B. is an optional guideline in democratic governance
C. can be easily changed to suit political needs
D. has little influence on the governmental structure

Q5. June 12 is celebrated as World Day against Child Labour every year. Your school has planned to organise an awareness session for parents and students on the topic ' Education: The Right Response to Child Labour' to observe that day. Write an invitation in 50 words. inviting a renowned journalist, Gauri Das to deliver a talk at the session. You are Ayush/Ayushi, the Secretary of the Social Service Club of Greenwood Public School, New Delhi.   **4**

Q6. You are Tanvi/Tarun, a student of Class 12. You have been observing how modern lifestyle is disconnecting people from nature. Write an article in about 120–150 words for your school magazine on the topic: Losing Touch with Nature: A Silent Crisis   **5**

Q7. Read the given extract and answer the questions that follow.   **3**

> It would be an exotic moment
> without rush, without engines,
> we would all be together
> in a sudden strangeness.
> Fishermen in the cold sea
> would not harm whales
> and the man gathering salt
> would look at his hurt hands

i. The moment of silence is called 'exotic' because it   1
   - A. is unfamiliar to most of us
   - B. contains perfect peace and harmony
   - C. is a step towards understanding ourselves
   - D. we would find solutions to our problems

ii. Keeping Quiet utilises fishermen to symbolise man's _____.   1

iii. Assertion: All marine animals will be saved, helping to maintain ecological balance.   1
Reason: Fishermen will stop their merciless act of fishing
   - A. Both assertion and reason are correct and the reason is the correct explanation of the assertion
   - B. Both assertion and reason are correct but the reason is not the correct explanation of the assertion.
   - C. Assertion is true and reason is false.
   - D. Assertion is false and the reason is true.

Q8. Read the given extract and answer the questions that follow.   **2**

> Gainst the hot season; the mid-forest brake,
> Rich with a sprinkling of fair musk rose blooms;
> And such too is the grandeur of the dooms
> We have imagined for the mighty dead;

i. Which of these BEST indicates the phrase 'mid forest brake'?   1
   - A. hidden pond
   - B. mass of shrubs
   - C. canopy of trees
   - D. sparkling streams
ii. Based on the extract, complete the following analogy: have heard;
   alliteration :: _____ oxymoron.   1

Q9. Answer the following questions in 40-50 words. **2**

Why do you think Mukesh is content with driving a car and never dreams of flying an aeroplane in the lesson, 'Lost Spring'?

Q10. Create a poster or visual artwork that expresses the core ideas of the poem: **5**

(stillness and silence, unity of humanity, peace and self-reflection, need to pause from chaos and destruction

Subject: Hindi Core

No. of questions: 10   M.M. 25

प्रश्न 1   निम्नलिखित गद्यांश पर आधारित प्रश्नों के उत्तर निर्देश के अनुसार दीजिए ः
.
.   **(1×5=5)**

विषमता शोषण की जननी है।समाज में जितनी विषमता होगी, सामान्यतया शोषण उतना ही अधिक होगा।चूँकि हमारे देश में सामाजिक, आर्थिक, शैक्षणिक व सांस्कृतिक असमानताएँ अधिक हैं जिसकी वजह से एक व्यक्ति एक स्थान पर शोषक तथा वही दूसरे स्थान पर शोषित होता है चूँकि जब बात उपभोक्ता संरक्षण की हो तब पहला प्रश्न यह उठता है कि उपभोक्ता किसे कहते हैं? या उपभोक्ता की परिभाषा क्या है?सामान्यतः उस व्यक्ति या व्यक्ति समूह को उपभोक्ता कहा जाता है जो सीधे तौर पर किन्हीं भी वस्तुओं अथवा सेवाओं का उपयोग करते हैं।इस प्रकार सभी व्यक्ति किसी-न-किसी रूप में शोषण का शिकार अवश्य होते हैं।हमारे देश में ऐसे अशिक्षित, सामाजिक एवं आर्थिक रूप से दुर्बल अशक्त लोगों की भीड़ है जो शहर की मलिन बस्तियों में, फुटपाथ पर, सड़क तथा रेलवे लाइन के किनारे, गंदे नालों के किनारे झोंपड़ी डालकर अथवा किसी भी अन्य तरह से अपना जीवन-यापन कर रहे हैं।वे दुनिया के सबसे बड़े प्रजातांत्रिक देशों की समाजोपयोगी उर्ध्वमुखी योजनाओं से वंचित हैं, जिन्हें आधुनिक सफ़ेदपोशों, व्यापारियों, नौकरशाहों एवं तथाकथित बुद्धिजीवी वर्ग ने मिलकर बाँट लिया है।सही मायने में शोषण इन्हीं की देन है।उपभोक्ता शोषण का तात्पर्य केवल उत्पादकता व व्यापारियों द्वारा किए गए शोषण से ही लिया जाता है जबकि इसके क्षेत्र में वस्तुएँ एवं सेवाएँ दोनों ही सम्मिलित हैं, जिनके अंतर्गत डॉक्टर, शिक्षक, प्रशासनिक अधिकारी, वकील सभी आते हैं।इन सबने शोषण के क्षेत्र में जो कीर्तिमान बनाए हैं वे वास्तव में गिनीज बुक ऑफ वर्ल्ड रिकॉर्ड्स में दर्ज कराने लायक हैं।

(i) शोषण किससे उत्पन्न होता है ?
   (क) समता से
   (ख) विषमता से
   (ग) दक्षता से
   (घ) शिष्टता से

(ii) शोषण का शिकार कौन होता है?
   (क) कुछ व्यक्ति
   (ख) गरीब व्यक्ति
   (ग) सभी व्यक्ति
   (घ) अमीर व्यक्ति

(iii) निम्नलिखित कथन (A) तथा कारण (R) को ध्यानपूर्वक पढ़िए तथा दिए गए विकल्पों में से कोई एक सही विकल्प चुनकर लिखिए।

कथन (A) सामान्यतः उस व्यक्ति या व्यक्ति समूह को उपभोक्ता कहा जाता है जो सीधे तौर पर किन्हीं भी वस्तुओं अथवा सेवाओं का उपयोग करते हैं।

कारण (R) हमारे देश में सामाजिक, आर्थिक, शैक्षणिक व सांस्कृतिक असमानताएँ अधिक हैं।

1 कथन (A) तथा कारण (R) दोनों गलत हैं।

2 कथन (A) गलत है परन्तु कारण (R) सही है।

3 कथन (A) सही है परन्तु कारण (R) गलत व्याख्या करता है।

4 कथन (A) सही है और कारण (R) कथन की सही व्याख्या करता है।

(iv) हमारे देश में कैसे लोगों की भीड़ है ?

(v) गिनीज बुक ऑफ वर्ल्ड रिकॉर्ड्स में क्या दर्ज कराने लायक है?

प्रश्न 2 'भारत की आर्थिक व्यवस्था' विषय पर 100 से 120 शब्दों में अनुच्छेद लिखिए। $(5×1=5)$

प्रश्न 3 रेडियो और टेलीविजन समाचार की भाषा और शैली कैसी होनी चाहिए? $(2×1 = 2)$

प्रश्न 4 रेडियो, अखबार और टी.वी. में क्या अंतर है । $(2×1 = 2)$

प्रश्न 5 पाठ के आधार पर भक्तिन की तीन विशेषताएँ बताइए। $(1½×1= 1½)$

प्रश्न 6 बाज़ार किसी का लिंग, जाति, धर्म या क्षेत्र नहीं देखता, वह देखता है सिर्फ उसकी क्रय शक्ति को। आप इससे कहाँ तक सहमत हैं $(1½×1 = 1½)$

प्रश्न 7 संसार में कष्टों को सहते हुए भी खुशी और मस्ती का माहौल कैसे पैदा किया जा सकता है? $(1½×1 = 1½)$

प्रश्न 8 कवि बच्चों की तुलना कपास से किस प्रकार करते हैं? $(1½×1 = 1½)$

प्रश्न 9 अपने घर और विद्यालय के आस-पास हो रहे उन बदलावों के बारे में लिखें जो सुविधाजनक और आधुनिक होते हुए भी बुजुर्गों को अच्छे नहीं लगते।अच्छा न लगने के क्या कारण होंगे?
$(1×1 = 1)$

परियोजना कार्यः

प्रश्न 10 पतंगी कागज़ से एक पतंग बनाकर उस पर देश में अमन बनाए रखने के लिए दो संदेश लिखिए। $(4×1=4)$

Subject: Mathematics

No. of questions: 5   M.M. 25

Each question carries 5 marks

Do as directed:

Q1

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

Find A^{-1}, where   . Hence solve the system of equations

$$x + 2y - 3z = -4, \; 2x + 3y + 2z = 2, \quad 3x - 3y - 4z = 11$$

Q2

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

If   , find A^{-1} and hence solve the system of linear equations

$$x + 2y + z = 4, \; -x + y + z = 0, \; x - 3y + z = 2$$

Q3

$$\begin{bmatrix} -4 & 4 & 4 \\ -7 & 1 & 3 \\ 5 & -3 & -1 \end{bmatrix} \begin{bmatrix} 1 & -1 & 1 \\ 1 & -2 & -2 \\ 2 & 1 & 3 \end{bmatrix}$$

Determine the product   and use it to solve the system
of equations :

$$x - y + z = 4, \quad x - 2y - 2x = 9, \qquad 2x + y + 3z =$$

Q4

$$\begin{bmatrix} 1 & -1 & 2 \\ 0 & 2 & -3 \\ 3 & -2 & 4 \end{bmatrix} \begin{bmatrix} -2 & 0 & 1 \\ 9 & 2 & -3 \\ 6 & 1 & -2 \end{bmatrix}$$

Determine the product   and use it to solve the system
of equations : $x + 3z = 9$ $, -x + 2y - 2z = 4$ $, 2x - 3y + 4z = -3$

Q5   Solve the following system of equations, using matrix method

$$x + 2y + z = 7, \; x + 3z = 11, \; 2x - 3y = 1$$

Subject: Physics

No. of questions: 10   M.M. 25

Objectives:
- Revision of concepts
- Application of the concepts to real life situations.
- Skills to carry out research work and develop scientific aptitude.

Instructions:

- Neatly write all the answers in your notebook.
- Attempt the questions keeping in mind the weightage of each question

Q1. A charge q is placed at the point of intersection of body diagonals of a cube. The electric flux passing through any one of its face is   1
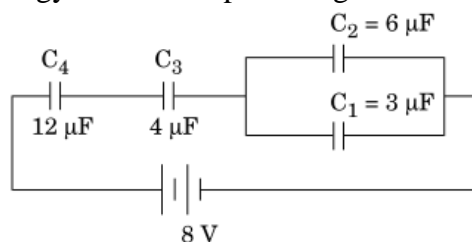
(a) $\frac{q}{6\epsilon_0}$ (b) $\frac{3q}{\epsilon_0}$ (c) $\frac{6q}{\epsilon_0}$ (d) $\frac{q}{3\epsilon_0}$

Q2. The electric potential of earth is taken to be zero because earth is a good   1
(a) insulator   (b) conductor   (c) semiconductor   (d) dielectric

Q3. How many electrons must be added to one plate and removed from the other so as to store 25.0J of energy in a 5.0μF parallel plate capacitor? Justify!   2

**Q4**. Find total energy stored in capacitors given in circuit.   2

Q5. Using Gauss's law, derive expression for intensity of electric field at any point near the infinitely long straight uniformly charged wire. Draw a labeled diagram as well .   2

Q6. List two properties of equipotential surface. Depict the equipotential surfaces due to
(i) an electric dipole   (ii) two identical negative charges separated by a small distance.   (1+2=3)

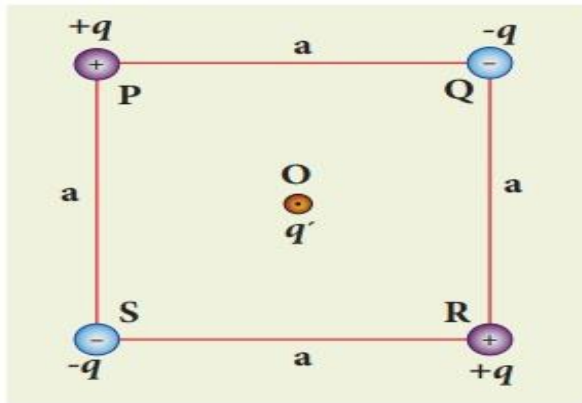**Q7**. The electric field components in the following figure are $E_x = \alpha x$, $E_y = 0$, $E_z = 0$: in which $\alpha = 400N/Cm$. Calculate (i) the electric flux through the cube, and (ii) the charge within the cube assume that $a = 0.1m$.   3
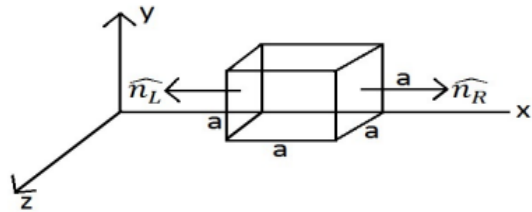
Q8 Define electrostatic potential at a point. Write its SI unit.   3

Calculate electrostatic potential energy of the system of charges shown below

.

Q9.A parallel plate capacitor is charged by a battery. After sometime the battery is disconnected and a dielectric slab with its thickness equal to the plate separation is inserted between the plates. How will (*i*) the capacitance of the capacitor, (*ii*) potential difference between the plates and (*iii*) the energy stored in the capacitor be affected? Justify your answer in each case.   3

Q10. (i) A point charge Q is placed at point O as shown in the figure. The potential difference $V_A - V_B$ is positive. Is the charge Q negative or positive? Justify.   1
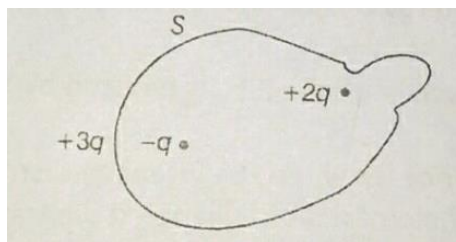

(ii) If the electric field is given by $6\hat{\imath} + 3\hat{\jmath} + 4\hat{k}$, Calculate the electric flux through a surface of area 20 units lying in $y - z$ plane.   2

(iii) What is the electric flux through the surface S due to the configuration given below ,?   2

Subject: Chemistry
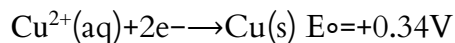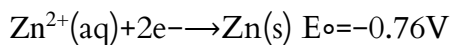
No. of questions: 10   M.M. 25

1. Define the terms: (a) Electrolytic cell (b) Standard Electrode Potential   2
2. State Faraday's both law of electrolysis. Write their mathematical expression.   3
3. Calculate the standard cell potential (E°_{cell}) of a galvanic cell with the following half-cell reactions:
                                                                                             3

   $Zn^{2+}(aq) + 2e^- \longrightarrow Zn(s)$ $E^{\circ} = -0.76V$

   $Cu^{2+}(aq) + 2e^- \longrightarrow Cu(s)$ $E^{\circ} = +0.34V$

4. What is the function of the salt bridge in an electrochemical cell?   2

5. How many moles of electrons are required for the reduction of 1 mole of MnO_4^- to Mn^{2+} in an acidic solution?   2

6. Write the Nernst equation for the electrode potential of a metal ion M^{n+}/M.   2

7. Explain the difference between primary and secondary batteries, giving one example for each.   3

8. What is corrosion? Suggest one method to prevent the corrosion of iron.   2

9. The conductivity of a 0.01 M solution of acetic acid is $4 \times 10^{-4} Scm^{-1}$. Calculate its molar conductivity.
                                                                                             3

10. State Kohlrausch's law of independent migration of ions and give its two applications.   3

Subject: Computer Science

No. of questions: 7   M.M. 25

Q1 What is the function of Modem? Name any two components required for net-working. 2

Q2 Explain the purpose of a router and repeater. 2

Q3 What is the difference between the following: 2x3=6
  a) HTTP and FTP
  b) Message Switching and Packet Switching in networking
  c) DNS and URL

Q4 Write one advantage of star topology network? Also, illustrate how five (5) computers can be connected to each other using star topology of network. 1+2=3

Q5 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 centres 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 given.
As a network consultant, you have to suggest the best network related solution for their issues/problems raised in (i) to (iv) keeping in mind the distance between various locations and given parameters. 4

XCITY   YHUB

Head Office

VILLAGE 1 VILLAGE 3
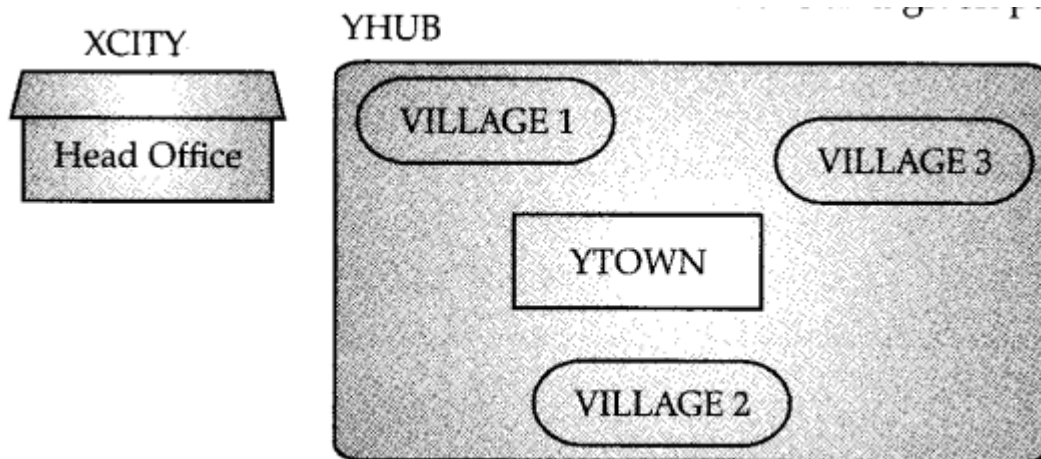
YTOWN

VILLAGE 2

Shortest distance between various locations:

VILLAGE 1 To YTOWN	2 KM
VILLAGE 2 To YTOWN	1.2 KM
VILLAGE 3 To YTOWN	3 KM
VILLAGE 1 To VILLAGE 2	3.5 KM
VILLAGE 1 To VILLAGE 3	4.5 KM
VILLAGE 2 To VILLAGE 3	3.5 KM
CITY Head office to YHUB	30 KM

Class 12 Worksheet 2

Number of computers installed at various locations are as follows:

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

Note:
• In Villages, there are community centres, 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.

1. 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.

2. Suggest the best wired medium and draw the cable layout (location to location) to efficiently connect various locations within the YHUB.

3. Which hardware device will you suggest to connect all the computers within each location of YHUB?

4. Which server/protocol will be most helpful to conduct live interaction of Experts from Head office and people at YHUB locations?

Q6 :   Rehan School, in Mumbai is starting up the network between its different wings. There are four Buildings named as SENIOR, JUNIOR, ADMIN and HOSTEL as shown below: 4

SENIOR

JUNIOR
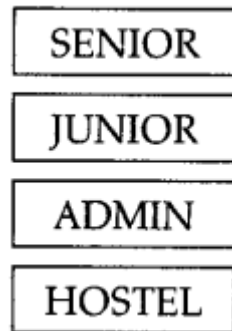
ADMIN

HOSTEL

Class 12 Worksheet 2

The distance between various buildings is as follows:

The distance between various buildings is as follows:

ADMIN TO SENIOR	200m
ADMIN TO JUNIOR	150m
ADMIN TO HOSTEL	50m
SENIOR TO JUNIOR	250m
SENIOR TO HOSTEL	350m
JUNIOR TO HOSTEL	350m

Number of Computers in Each Building :

SENIOR	130
JUNIOR	80
ADMIN	160
HOSTEL	50

1. Suggest the cable layout of connections between the buildings.

2. Suggest the most suitable place (i.e., building) to house the server of this school, provide a suitable reason.

3. Suggest the placement of the following devices with justification.

   o Repeater

   o Hub/Switch

4. The organisation also has inquiry office in another city about 50-60 km away in hilly region. Suggest the suitable transmission media to interconnect to school and inquiry office out of the following :

   o Fiber optic cable

   o Microwave

   o Radiowave

Q7   SONA Inc. is planning to connect its Bengaluru Office Setup with its Head Office in Delhi. The Bengaluru Office G.R.K. international Inc. is spread across and area of approx. 1 square kilometer, consisting of 3 blocks – Human Resources, Academics and Administration.
You as a network expert have to suggest answers to the four queries (i) to (iv) raised by them.
Notes : Keep the distance between blocks and number of computers in each block in mind, while providing them the solutions.   4

Bengaluru Office Setup

Human Resource

Delhi Head Office

Administration
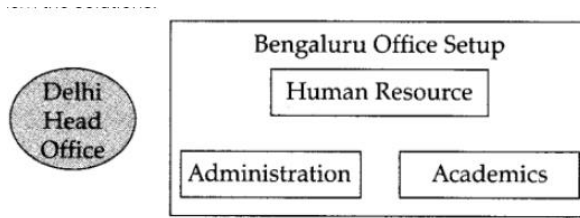
Academics

Shortest distances between various blocks:

Human Resources to Administration	100 m
Human Resources to Academics	65 m
Academics to Administration	110 m
Delhi Head Office to Bengaluru Office Setup	2350 km

Number of computers installed at various blocks are as follows:

BLOCK	No. of Computers
Human Resources	155
Administration	20
Academics	100
Delhi Head Office	20

1. Suggest the most suitable block in the Bengaluru Office Setup, to host the server.
    Give a suitable reason with your suggestion.

2. Suggest the cable layout among the various blocks within the Bengaluru Office Setup for connecting the Blocks.

3. Suggest a suitable networking device to be installed in each of the blocks essentially required for connecting computers inside the blocks with fast and efficient connectivity.

4. Suggest the most suitable media to provide secure, fast and reliable data connectivity between Delhi Head Office and the Bengaluru Office Setup.

Subject: Biology

No. of questions: 10   M.M. 25

Q1. Persistent nucellus is called _____ and is found in _____.   (1)
   a) perisperm, black pepper
   b) perisperm, groundnut '
   c) endosperm, black pepper
   d) endosperm groundnut

Q2. Identify the wrong statement regarding post-fertilisation development.   (1)
   a) The ovary wall develops into pericarp.
   b) The outer integument of ovule develops into tegmen.
   c) The fusion nucleus (triple nucleus) develops into endosperm.
   d) The ovule develops into seed.

Q3. The anther wall consists of four wall layers where   (1)
   a) tapetum lies just inner to endothecium
   b) middle layers lie between endothecium and tapetum
   c) endothecium lies inner to middle layers
   d) tapetum lies next to epidermis.

Q4. Draw a neat, labelled diagram of a mature pollen grain.   (2)

Q5. Which part of the sperm contains enzymes to penetrate the ovum? Trace events   (2)

Q6. Explain the formation of embryo sac from megaspore mother cell.   (3)

Q7. Mention any three differences between STDs and infertility.   (3)

Q8. Write short notes on: (1*3=3)

   (i) Amniocentesis

   (ii) Medical Termination of Pregnancy (MTP)

   (iii) ZIFT

Q9. A couple, married for 3 years, is unable to conceive. Medical tests reveal low sperm   (2+1+1=4)
   count in the male and blocked fallopian tubes in the female.

   (i) Identify two possible ART techniques that may help them.

   (ii) Briefly describe the principle of these techniques.

   (iii) What are the ethical concerns related to ART?

Q10.Observe the figure and answer the following questions   (2+2+1=5)
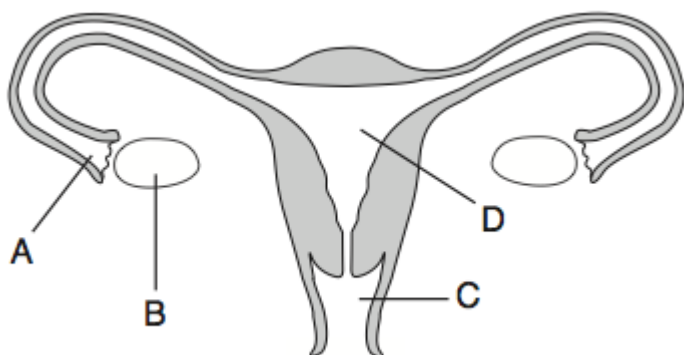
(i) Label A, B, C, and D.

(ii) Describe the physiological events taking place in the labelled parts.

(iii) Explain the significance of this process in reproduction.

Activity: Menstrual cycle snap
 Students will make flash cards and write the phases and events and role on that flash cards shuffle them
 and arrange them according to the days.

Subject: Informatics Practices

No. of questions: 2   M.M. 25

Q1. Write SQL queries on the basis of following table.   1x15=15

Relation : Student

Name	Class	Fee	Gender	DOB
Sanjay Kumar	XII	1200	M	01-02-2005
Junaid Khan	XII	1200	M	11-12-2004
Romi Lal	XI	1050	M	12-10-2006
Sonam Khanna	XI	1050	F	NULL
Mollie Garg	XII	1200	F	19-09-2005
Navyam Mahajan	X	950	M	16-06-2008

i.   Display all records from table student.
ii.   List names of all students from table student.
iii.   List name and class of all students from table student.
iv.   List all students studying in class XII.
v.   List names of male students.
vi.   Show information of students having fee more than 1000.
vii.   Show name, fee and class of students having fee below or equal to 1100.
viii. View all records in ascending order of student's name.
ix.   View name and fee of all students in descending order of fee.
x.   List male students in descending order of their class.
xi.   Write a query to display names in uppercase.
xii.   Display the first 3 letters of each student's name.
xiii   Show the length of each student's name.
xiv   Show square of each student's marks.
xv   Display students born after June (month > 6).

Class 12 Worksheet 2

Q2. Write SQL queries on the basis of following table.   1x10=10
Relation : Teacher

TName	Incharge	Salary	Gender	Dateofjoin
Soham Sharma	XII	12000	M	11-02-2015
Ekta Gandhi	XII	12500	M	21-12-2014
Manisha Lamba	XI	13500	F	22-10-2016
Sujoy Ghosh	XI	21050	M	22-10-2016
Sonakshi Garg	XII	21000	F	19-08-2015
Suman Walia	X	16950	F	26-06-2018

i.   Show information of teachers having salary more than 20000.
ii.   List teachers who are incharge of classes X or XII.
iii   List teachers teaching class X or having salary more than 10000.
iv.   View those records where salary is between 10000 and 20000.
v.   List female teachers having salary 21000.
vi.   List different classes available in above table (no duplicates) .
vii.   List salary and names of teachers having salary less than 15000 or more than 20000 .
viii.   List name, salary and annual salary(salary*12) of all teachers.
ix.   List name of all teachers teaching class XII.
x.   List name and salary of all teachers who joined before '2016-10-01'.

Class 12 Worksheet 2

Subject: Business Studies

No of questions: 10   M.M: 25

Q.1 'The management gives a common direction to the individual effort in achieving the overall goal of the
organisation.' Which point of importance of management is highlighted in this statement?   1
   a) Helps in achieving personal objectives
   b) Helps in achieving group goals
   c) Helps to increase efficiency
   d) Helps to create a dynamic organisation

Q.2 The objective of management which consistently creates economic value for various constituents of
society is :   1
   a) Organisational objective   b) Social objective
   c) Personal objective   d) Both Social and Personal objective.

Q.3 Loyd company limited manufacturer's motorcycle and cars. It has two separate divisions for both
of them. Each division has its own in-charge, plans and execution resources. On the account of the
working of two divisions overlap. Which principle of management violated by the Loyd company limited.
                                                                                                           1
   a) Unity of command   b) Scalar chain
   c) Unity of direction   d) Discipline

Q.4 McDonald company does not give its franchise to any other company which is running food business.
State the type of plan involved.   1

Q.5 Vrinda's business studies teacher instructed her to prepare a business studies project and submit it
within 30 days. She did intensive research for the project and prepared an excellent project but failed to
meet the deadline. Teacher appreciated her hard work but deducted 5% marks for late submission. Do you
think Vrinda is effective, efficient or both? Give reason.   1

Q.6 Super Fine Rice Ltd. has the largest share of 55% in the market. The company_s policy is to sell only
for cash. In 2015, for the first time company's number one position in the industry has been threatened
because other companies started selling rice on credit* also. But the managers of Super Fine Rice Ltd.
continued to rely on its previously tried and tested successful plans which didn't work because the
environment is not static. This led to decline in sales of Super Fine Rice Ltd. The above situation is
indicating two limitations of planning which led to decline in it sales. Identify these limitations.   3

Q.7 Aapka Vidyalaya believes in the holistic development of students and encourages team building
through a mix of curricular, co-curricular and sports activities. On its Founder's Day, a stage performance
had to be put up. A committee of ten prefects was constituted to plan different aspects of the function.
They all decided to use recycled paper for decoration. There was a spirit of unity and harmony and all the

members supported each other. With mutual trust and a sense of belonging, the programme was systematically planned and executed. Kartik, one of the prefects, realised that the group had unknowingly applied one of the principles of management while planning and executing the programme. He was so inspired by the success of this function that he asked his father to apply the same principle in his business. His father replied that he was already using this principle.

a. Identify the principle of management applied for the success of the programme.

b. State any two features of management highlighted in the above paragraph   3

Q.8   As per the directions issued by Supreme court, the government passed an order to ban the sale of tobacco products within the area of 200 meters of all educational institutions as:

(a) it's consumption is injurious to health.

(b) People are becoming more conscious about health and fitness.

It is indicating the government 's attitude towards this business. Identify the ' Business Environment ' under four different dimensions quoting the lines from the above paragraph.   4

Q.9   "Coordination is needed at all levels of management and it is the responsibility of all managers."
Explain.   4

Q.10   Suhasini, a home science graduate from a reputed college, has recently done a cookery course. She wished to start her own venture with a goal to provide _health food_ at reasonable prices. She discussed her idea with her teacher (mentor) who encouraged her. After analysing various options for starting her business venture, they shortlisted the option to sell readymade and _ready to make_ 21 vegetable shakes and sattu milk shakes. Then, they weighed the pros and cons of both the short-listed options.

1. Name the function of management being discussed above and give any one of its characteristics.

2. Also briefly discuss the limitations of the function discussed in the case.   6

Activity:

Identify the key words and write their proper heads and subheads:

Key Words	Topic	Sub – Topic
a) Comparing actual performance with standard performance and analysing deviations b) Responsible for the growth and survival of the firm c) Oversee the activities of actual workforce d) Right person for the right job e) Concerned with doing the right task f) Concerned with only cost reduction g) It can't be seen but its presence can be felt h) Present everywhere irrespective of any organisation i) Has to adapt itself according to the changes taking place in the environment j) Interlinked with both work and people k) As a part of society it has some obligations towards society also l) Maintains the safety standards and quality of output		

Subject: Accountancy

No. of questions: 10   M.M. 25

Q.1 Salaries outstanding Rs.55,000 will be record in the balance sheet under ……..   1
    a. Other Current Liabilities   b. Short term borrowings
    c. Other Current Assets   d. Non-current Liabilities

Q.2 An asset shall be classified as current when it satisfies any of the following criteria?   1
    a. It is part of fixed assets   b. It is an old asset in the firm
    c. It is not the part of business   d. It is expected to be realized within a year

Q.3 Current ratio of Reliance Textiles Ltd. Is 1.5 at present. In future it wants to improve this ratio to 2.
    Suggest any two-accounting transaction for improving the current ratio.   1

Q.4 Why do we add back depreciation to net profit while calculating cash flow from operating activities?   1

Q.5 Why prepaid expenses are not considered as liquid assets?   1

Q.6 Explain the objectives of Analysis of Financial Statement.   3

Q.7 From the given information, calculate the Inventory turnover ratio: Revenue from operations Rs.5,00,000,
    Gross Profit 25% on cost of revenue from operations, opening Inventory was 1/3rd of the value of closing
    Inventory. Closing Inventory was 30% Of Revenue from operations.   3

Q.8 Under which major head of the statement of profit and loss of a company following items will be shown: 4
    (i) Sales   (ii) Sale of Scrap
    (iii) Interest earned   (iv) Gratuity   Paid

Q.9 The debt equity ratio of a company is 1:1 state giving reasons, (any four) which of the following would
    improve, reduce or not change the ratio   4
      (i) Purchase, of machinery for cash
      (ii) Purchase of goods on credit
      (iii) Sale of furniture at cost
      (iv)Sale of goods at a profit
      (v)Redemption of debentures at a premium

Q.10 Aditya Sunrise Ltd. provides you the following information:

Particulars	**31.3.2023(₹)**	**31.3.2022(₹)**
10% Bank Loan	Nil	1,00,000

Additional Information:

1. Equity Share Capital raised during the year ₹3,00,000;
2. 10% Bank Loan was repaid on 01.04.2022.
3. Dividend received during the year was ₹20,000.
4. Dividend Proposed for the year 2021-22 was ₹50,000 but only ₹20,000 was approved by the Shareholders.

Find out the cash flow from Financing Activities.   6

Activity: Design creative badges for each financial ratio with name, formula, and a symbol (e.g., water droplet for liquidity).

Notes to Accounts

1. Reserves and Surplus

General Reserve	3,10,000	3,00,000
Surplus i.e. Balance in Statement of P/L	68,000	56,000
	3,78,000	**3,56,000**

Additional Information:

i) Investments costing Rs.8,000 were sold during the year for Rs.8,500

ii) Provision for Tax made during the year was Rs.9,000

iii) A part of the fixed assets costing Rs.10,000 was sold for Rs.12,000 during the year and profit was included in the Statement of Profit and Loss

iv) Dividend paid during the year amounted to Rs.40,000

Subject: Economics

No. of questions: 10   M.M. 25

Q1. A government is evaluating GDP as an index of welfare but finds that pollution levels have increased due to industrial expansion. How can such externalities challenge GDP as an indicator of societal well-being? Provide a reasoned analysis.   2

Q2. Suppose a central bank wants to control inflation by adjusting the money supply. Define money supply and explain its main components. How can changes in these components influence the economy?   2

Q3. A nation with a high domestic income compared to national income is investigating the causes behind this discrepancy. Distinguish between domestic and national income and discuss a scenario where domestic product could exceed the national product.   2

Q4. Imagine a bakery purchases flour for making bread and then sells the finished loaves to consumers. Based on this example, explain the classification of goods into intermediate and final goods, and illustrate with other suitable examples.   2

Q5. A company in India pays salaries to employees working in its foreign branch, while an Indian engineer earns wages abroad and sends money home. Define factor income to abroad and factor income from abroad and provide a relevant example for each case.   2

Q6. A company assesses various economic indicators to determine business stability. Classify whether the following are stock or flow concepts and justify your reasoning:
(a) Wealth, (b) Cement production, (c) Household savings.   2

Q7. Evaluate whether the following should be included in the national income estimation of a country. Support your answer with appropriate reasoning:
- Bonus received by employees.
- Government expenditure on defense.
- Money sent by a worker employed abroad to their family.   3

Q8. A policymaker is analyzing different components that contribute to net domestic product at market price. Discuss whether each of the following plays a role in its estimation and provide reasoning:
- Net indirect tax
- Net export
- Net Factor Income from Abroad   3

Q9. A school purchases various items, including furniture and teaching supplies. Classify the following as intermediate or final products, providing justification for your classification:
1. Furniture purchased by the school.
2. Chalk, duster, etc., purchased by the school.   3

Q10. You are supposed to choose an economic news article from a reputable source and analyse its impact on the economy. You need to summarize the article, identify keyeconomic concepts discussed, and provide their insights and opinions on the topic.   3

**Activity: Comparative Analysis – Compare India's economic growth with another country
(like China or the USA) and analyze GDP trends, employment rates, and industrial development.**   3

Subject: History

No. of questions: 10   M.M. 25

1. Who was Francois Bernier? How many years did he spent in India?   1
2. What does the word antyaja mean?   1
3. Who was Montesquieu?   1
4. Name the different kinds of towns.   1
5. Examine why Bernier described the Mughal towns as the 'Camp Towns.   2
6. State the inherent problems faced by Al-Biruni in the task of understanding Indian social and Brahmanical practices. Mention any two sources that provided him the support.   2
7. Bernier's description of imperial land ownership influenced Western theorists like French philosopher Montesquieu and German Karl Marx." Justify it with suitable arguments.   3
8. Write a brief note on Indian Textile explained by Ibn Batutta in his book .   3
9. Ibn Battuta found Delhi as a city full of exciting opportunities." Support your answer with evidences given by him.   3
10. The conception of social pollution intrinsic to the caste system was contrary to the law of nature." Examine Al-Biruni's statement on Indian caste system.   8

Subject: Political Science

No. of questions: 10   M.M. 25

Objective: - To enable the students to know about the inventions of new concepts in world politics and constitution of India.

- To develop 21st century managerial skills of co-ordination, self-direction and time management.
- To understand contemporary political issues in context to our past.
- To develop a global perspective and an international outlook.

Research Activity: - Research and collect the information on recent revolution of political ideas in the world and India, in the following areas.

- Comparison between NITI Aayog and Planning Commission and their contribution in India's Development.
- Health Epidemic – A new source of security threat

Assignment: - ***Project Work***

Project Ideas

- · Cold War- Is the world heading to cold war 2 – USA and China
- · India's planned development – from Planning Commission to NITI Aayog
- · India's Foreign Policy since independence.
- · Political Impact on Indian Legislations.
- · Political Impact on India's international standing.
- · Indian political stand on United Nations General Assembly 2024.
- · Relevance of SAARC as a forum of regional cooperation.
- · Division of Germany with special focus on the construction and dismantling of the Berlin wall.
- · CIS- Central Asian Republics.
- · Arab Spring
- · Crisis in Middle East with special focus on Operation Desert Storm, Operation Iraqi Freedom, Iraq today.
- · European Union and BREXIT.
- · BRICS
- · India's Nuclear Policy.
- · U.S. dominance in World politics in the Post-Cold War era.
- · India's role in Non Aligned Movement.
- · Civil Society Movements - Role and participation in India.
- · Relevance of the United Nations in a Unipolar World.
- · Understanding Resource Geopolitics and Environment degradation
- · India's external relations -Critical analysis of the foreign policy of India especially with its immediate neighbours (Pakistan, China, Srilanka, Nepal, Myanmar)
- · Popular movements in the Post-Independence era and their outcomes.

Class 12 Worksheet 2

· Project on the role played by the regional aspirations in backing the secessionist and
  insurgency movement in India
· India's response to ASEAN as a dialogue partner.
· India-Pakistan Relation in contemporary world.
· QUAD

GUIDELINES FOR THE PROJECTS:
It must be emphasized that the process of doing the project is as important as the final project.
Once the project/projects are chosen, there should be a process of brainstorming to make out a
draft/structure for the project before embarking on research.
Internet sites could be referred, but care must be taken in selecting, using and citing these sites.
Avoid plagiarism
Marks to be awarded for content and originality and not for decorative elements and embellishments.
Projects must be the original work of the student.
Project may be supported by- Data, fact sheets, maps, articles, newspaper clips
Maximum of 25-30 page projects.

M.M-25

Q.1 Why was USSR disintegrated?   2

Q.2 How has 'Open door' policy benefitted China? Write two examples.   2

Q.3 Which regions were determined for regional cooperation in SAARC?   2

Q.4 What do you understand by International Atomic Energy Agency?   2

Q.5 Explain any three core objectives of ASEAN.   2

Q.6 Explain any two effects of the end of Cold War.   2

Q.7 Which treaties were signed by Soviet Union and US to limit their arms?   2

Q.8 What was the Cuban Missile Crisis?   3

Q.9 Explain any six factors that helped in making Soviet Union as a superpower after
   the Second World War.   3

Q.10   What was Nepal's democratic revolution and what was its result?   5

Class 12 Worksheet 2

Subject: Geography

No. of questions: 10   M.M. 25

Q1. Study the map carefully and answer the questions that follows: -
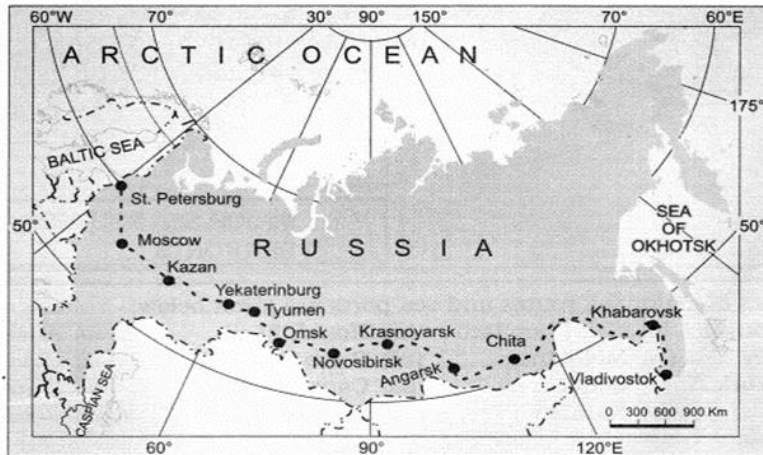
(i)   Name the railway line shown in the map.   1
(ii)   Name two ocean coasts which are being connected by this line.   1
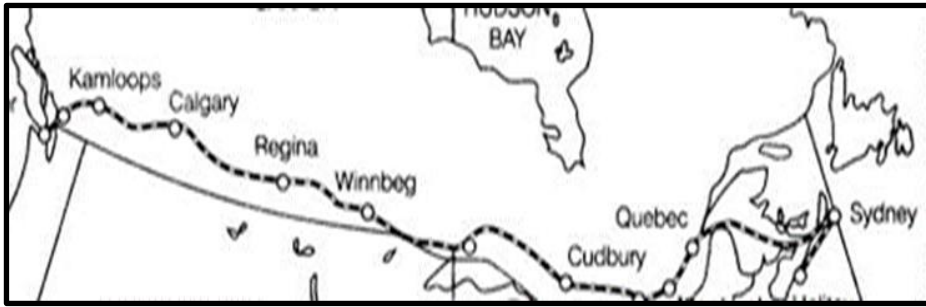(iii)   Write the significance of this railway line.   1

Q2. Study the map carefully and answer the questions that follows-
   1. Identify the type of waterway   1
   2. Name the seas connected through this waterway   1
   3. Name the end ports of this waterway   1

Q3. Study the given map carefully and answer the questions that follows: -
1. Identify the railway line in the given map.   1
2. Name the terminal station to east and the west coast   1
3. Name the oceans lying to the east and west of the terminal stations.   1

Q4. Study the given map and answer the questions: -
1. Name the type of waterway and name the countries served by this waterway.   1
2. Why it is considered important for Europe.   2
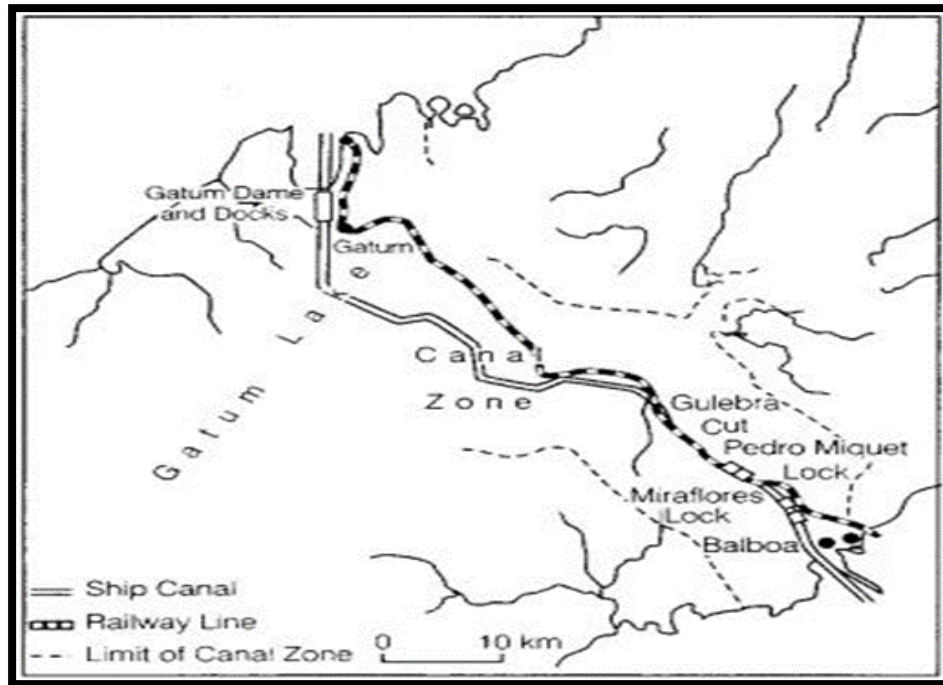

Q5. Study the map carefully and answer the questions: -
   1. Identify the canal Zone and write about its importance.   1
   2. Name the terminal points of this canal zone and the connecting seas.   1
   3. Explain is the lock system of this canal.   1

Ship Canal
Railway Line
Limit of Canal Zone   0   10 km

Q6. Study the given map and answer the questions that follows-
1. Identify the type of agriculture practiced in the shaded areas   1
2. Write 4 characteristics associated with this type of practice   2

Q7. Study the map given carefully and answer the questions that follows-
1.Identify the type of cultivation   1
2. Name the major crops cultivated in these areas.   1
3.'Low yield per acre but high yield per person' justify the statement.   2

Q8 Which is the oldest economic activity?   1
Q9 What are the different types of mining activity?   1
Q10 Why is hunting and gathering products not commercial?   1

Activity: **Discuss Current Events and make an infographic**

Have students bring in the world news section of a daily newspaper and select two cities currently in the news to locate on a map. Have small groups of student's researches and present their findings on ways in which the two cities are connected. For example, the cities might be linked by human migration routes, weather patterns, economic concerns, communication systems, or transportation networks.

Subject: Psychology

General Instructions:

No. of questions: 10   M.M. 25

Q1. Intelligence tests provide a _____of a person's general cognitive competence, including the ability to profit from schooling.   1

Q2. Aptitude tests are used to predict what an individual will be able to do if given proper _____ and _____.   1

Q3. Define intellectual deficiency.   2

Q4. What is Buddhi?   2

Q5. State the characteristics of individuals with a type A personality.   2

Q6. You have assessed 20 peers of your class for mathematical comprehension/ knowledge. Create a distribution for the results you are most likely to expect. What is the shape of this distribution?   2

Q7. How can a faulty behaviour be modified with a token economy? Elucidate with the help of an example.   3

Q8. The evidence for hereditary influences on intelligence comes mainly from studies of twins and adopted children. Concerning the role of environment, studies have reported that as children grow in age, their intelligence level tends to move closer to their adopted parents. Children from disadvantaged homes adopted into families of higher socio-economic status exhibit a large increase in their intelligence scores. There is evidence that environmental deprivation lowers intelligence while rich nutrition, good family background, and quality schooling increase intelligence. There is a consensus among psychologists that intelligence is the product of the complex interaction of heredity and environment. Heredity can be viewed as something that sets a range within which an individual's development is shaped by the support and opportunities of the environment. Studies have also shown the correlation between twins reared together (.60) and siblings reared together (.50) and siblings reared apart (.25) to share intelligence.

4

i. As children grows in age, their_____ tends to closer to their adoptive parents.
a. Moral value   b. Mental level   c. Intelligence level   d. All the above

ii. Environmental deprivation lowers_____
a. Insight Ness   b. Intelligence   c. wisdom   d. None of the above

iii. The evidence for the hereditary influences on intelligence comes mainly from

a. studies of twins   b. studies of adopted children   c. both a & b   d. neither a & nor b

iv. children from disadvantaged homes adopted into families of higher socio-economics status exhibit a large increase in their_____.

a. educational status   b. intelligence scores   c. social status   d. All the above

Q9. Rehaan is good at solving mathematical problems. Which intelligence according to Gardener would he excel in? Write the key characteristics of multiple intelligence.   4

Q10. How do Alfred Adler and Karen Horney Explain personality development?   4

Activity: Practical File:
      SCAT, AISS, SAS, SCQ, MPI
Sequence to write Psychological Test:-
1. Introduction of the test
2. Aim
3. Test Material
4. Introduction of the subject
5. Test Procedure
(a) Pre-arrangement
(b) Instructions
6. Precautions
7. Introspective Report
8. Behavioural Report
9. Scoring Method
10. Result Table
11. Explanation and Analysis
12. Conclusion

Subject: Music

No. of questions 7   **M.M.10**

Select the correct answer.
1. Pt. Krishan Rao Shanker Pandit was born in the year -   1
(a) 1892
(b) 1894
(c) 1896
(d) 1900

2. How many chapters are there in Sangeet Ratnakar?   1
(a) Seven
(b) Five
(c) Four
(d) Nine

3. The artist representing Gwalior Gharana :   1
(a) Krishna Rao Shankar Pandit
(b) Faiyaz Khan
(c) Bade Ghulam Ali Khan
(d) Dilip Chandra Bedi

4. Gram that became extinct in due course of time-   1
(a) Shadaj Gram
(b) Gandhar Gram
(c) Madhyam Gram
(d) Pancham Gram

5. Bracket () sign is used for   1
(a) Khatka
(b) Kan
(c) Meend
(d) Gamak

6. Write a detailed note on Dhamar Tala along with its Theka and Tigun.   2.5

7. Write a detailed description of Sangeet Parijat.   2.5

ACTIVITY
PRACTICE TAAL RUPAK

Subject: Painting

General Instructions: Please do practical work on A-3 sheet with 2 cm borders. It is for 20 marks. Theory needs to be done in the notebook. It is for 5 marks

M.M. 25

Q1. Draw a paint a Christmas carnival which happened last year in school. (Memory drawing)

Q2. Describe the techniques and materials used in the creation of early Indian manuscript paintings.

SUBJECT: PHYSICAL EDUCATION

No. of questions:10   **M.M.25**

Q.1 Differentiate between knockout and league tournament.   2

Q.2 Write down any three objectives of Intramural.   2

Q.3 Explain various activities involved during Extramural.   2

Q.4 Explain "run for fun" and "run for unity"   2

Q.5 Define community sports. Explain any four benefits of community sports.   2

Q.6 What are the different age groups that WHO has recommended various exercises guidelines for?   2

Q.7 What exercises children and adolescents aged 5–17 years must perform?   2

Q.8 Write down Physical activities exercise guideline for children under 5 of age.   3

Q.9 Briefly write about physical activities/exercises guidelines for adults above 65 of age.   3

Q.10 Explain any five postural deformities with their corrective measures.   5