

**1.Design handmade colorful comic strips exhibiting the summary of following fictions (Do any two):-**

a. Lost Spring    b. The Last Lesson    c. The Tiger King    d. Deep Water

**Rubrics For Assessment: Originality, Creativity and Presentation.**

**2. Make a creative power point presentation on Fiction/ Poetry assigned by teacher in class. It should include 10 to 12 slides. Also add following things.....**

a. Author's/Poet's Introduction and achievements

b. Theme, Central Idea, Message

c. Brief summary of the poem/fiction.

d. Poetic/literary Devices Used

**Rubrics for Assessment: Creativity/Originality , Content and Presentation.**

**3. Complete the assignment provided along with the Holidays' Homework and paste in your English Notebook . Revise the entire topics of English syllabus covered till date.**

**4. Read about writers/poets (Covered Till Date) and prepare a table calendar/Portfolio, which would include:**

- \*Coloured picture    \*Genre and era they belonged to
- \*Personal life    \*education    \*Literary works    \*Achievements
- \*Synopsis Of Fiction/Poet prescribed in Syllabus

## POLITICAL SCIENCE

### CHAPTER – I(End of Bipolarity)

**1. What does "bipolarity" in international politics refer to?**

- a) A system with two superpowers dominating global affairs
- b) A system with multiple power centers competing for global influence
- c) A system with no dominant powers and a balance of power
- d) A system where only one country holds all global power

**2. Which two superpowers dominated the bipolar world during the Cold War?**

- a) United States and China
- b) United States and Soviet Union
- c) Soviet Union and United Kingdom
- d) China and Russia

**3. What event marked the official end of the Cold War?**

- a) The signing of the Helsinki Accords
- b) The fall of the Berlin Wall
- c) The Cuban Missile Crisis
- d) The Korean War

**4. What term is used to describe the political and economic system that emerged in Eastern Europe and the Soviet Union after the Cold War?**

- a) Capitalism
- b) Socialism
- c) Communism
- d) Democracy

**5. Which international organization was established to promote economic cooperation and development among its member countries after World War II?**

- a) United Nations (UN)
- b) World Trade Organization (WTO)
- c) International Monetary Fund (IMF)
- d) European Union (EU)

**6. The end of bipolarity in international politics led to an increase in:**

- a) Proxy wars between superpowers
- b) Arms race between superpowers
- c) Multilateral diplomacy and cooperation
- d) Bipolarity in international politics

**7. Which country experienced a reunification process after the end of the Cold War?**

- a) China
- b) Germany
- c) India
- d) France

**8. The concept of "soft power" in international relations refers to:**

- a) Military strength and capabilities
- b) Economic sanctions and trade restrictions
- c) Influence and attraction through culture, values, and diplomacy
- d) Coercion and use of force to achieve foreign policy goals

**9. What organization played a significant role in maintaining global peace and security after the end of the Cold War?**

- a) NATO (North Atlantic Treaty Organization)
- b) BRICS (Brazil, Russia, India, China, South Africa)
- c) OPEC (Organization of Petroleum Exporting Countries)
- d) ASEAN (Association of Southeast Asian Nations)

**10. What was one of the major consequences of the end of bipolarity for smaller countries in international politics?**

- a) Increased dependence on superpowers for protection
- b) Reduced opportunities for economic growth and development
- c) Greater autonomy and ability to pursue their own foreign policies
- d) A return to colonial rule

## **CHAPTER – 2 (contemporary centers of power)**

**1. What are the contemporary centers of power primarily focused on?**

- a) Military power                      b) Economic power                      c) Cultural power                      d) Political power

**2. Which of the following countries is NOT considered one of the contemporary centers of power?**

- a) United States                      b) China                      c) Brazil                      d) South Africa

**3. In the context of contemporary power, what is "soft power"?**

- a) Military strength                      b) Economic dominance                      c) Cultural influence                      d) Political control

**4. The United Nations Security Council is an example of:**

- a) Soft power                      b) Hard power                      c) Supranational organization                      d) Regional organization

**5. Which country is known for its "Belt and Road Initiative" aimed at enhancing its global influence?**

- a) Russia                      b) India                      c) China                      d) Germany

**6. What is the primary focus of the BRICS group of countries?**

- a) Military cooperation                      b) Economic development  
c) Cultural exchange                      d) Environmental protection

**7. Which international organization promotes economic cooperation and development among its member countries, often through loans and financial assistance?**

- a) World Trade Organization (WTO)                      b) International Monetary Fund (IMF)  
c) United Nations (UN)                      d) World Bank

**8. What is the primary objective of the World Trade Organization (WTO)?**

- a) Promoting military alliances                      b) Facilitating economic negotiations  
c) Ensuring cultural preservation                      d) Enhancing political cooperation

**9. Which nation is considered a "superpower" due to its significant military, economic, and political influence on a global scale?**

- a) India                      b) Brazil                      c) China                      d) United States

**10. The concept of "Pax Americana" refers to:**

- a) American military dominance worldwide                      b) American economic isolationism  
c) American cultural hegemony                      d) American political neutrality

## **CHAPTER – 4 (Contemporary South Asia)**

**1. Which countries are considered the primary members of South Asia**

- A) India and China                      D) India, Pakistan, Afghanistan, and Iran  
C) India, Pakistan, Bangladesh, Sri Lanka, Nepal, Bhutan, and Myanmar                      B) India and Pakistan

**2. What is the primary focus of "Contemporary South Asia"?**

- A) Environmental challenges in South Asia                      B) Economic development in South Asia  
C) Political conflicts and cooperation in South Asia                      D) Cultural heritage of South Asia

**4. What organization was established to promote regional cooperation among South Asian countries?**

- A) SAARC (South Asian Association for Regional Cooperation)                      B) UN (United Nations)  
C) ASEAN (Association of Southeast Asian Nations)  
D) OPEC (Organization of the Petroleum Exporting Countries)

**5. Which of the following statements is true regarding India's relationship with Pakistan?**

- A) India and Pakistan have never engaged in any conflict or disputes.  
 B) The Kashmir issue has been a major source of tension between India and Pakistan.  
 C) India and Pakistan are both members of ASEAN.  
 D) India and Pakistan have a strong military alliance.
- 6. Which South Asian country is known for its Buddhist heritage and pilgrimage sites?**  
 A) Nepal                      B) Bangladesh                      C) Sri Lanka                      D) Maldives
- 7. What is the primary reason behind the water dispute between India and Bangladesh?**  
 A) Competition for tourism revenue                      B) Fishing rights in the Bay of Bengal  
 C) Sharing of river waters                      D) Border disputes
- 8. What role has the United States played in South Asia,?**  
 A) Mediator in South Asian conflicts                      B) Primary supplier of arms to South Asian countries  
 C) Member of SAARC                      D) Not involved in South Asian affairs
- 9. What is the significance of the SAARC organization in South Asia?**  
 A) It has successfully resolved all regional conflicts.  
 B) It promotes economic cooperation and regional integration among South Asian countries.  
 C) It focuses solely on military alliances in the region.  
 D) It is primarily concerned with environmental issues.
- 10. Which South Asian country has been a victim of political instability, including military coups and frequent changes in government?**  
 A) Nepal                      B) Bhutan                      C) Sri Lanka                      D) Myanmar

#### **CHAPTER – 5(International Organizations)**

- 1. The International Court of Justice popularly known as the**  
 (a) World Court.                      (b) Supreme Court.                      (c) Criminal Court. (d) Subordinate Courts.
- 2. Trygve Lie was the first Secretary General from**  
 (a) Germany.                      (b) Norway.                      (c) France.                      (d) Italy.
- 3. The two aspects of Human Rights are**  
 (a) Social and legal aspects.                      (b) Natural and legal aspects.  
 (c) Economic and political aspects.                      (d) Economic and natural aspects.
- 4. The international organisation that works for the protection of human rights all over the world is**  
 (a) Amnesty International.                      (b) International Monetary Fund.  
 (c) World Trade Organisation.                      (d) International Court.
- 5. The original member nations that signed the charter of the United Nations back in 1945 were**  
 (a) 58.                      (b) 49.                      (c) 51.                      (d) 45.
- 6. The UNs most visible public figure and representative head is the**  
 (a) Chief Executive Officer.                      (b) Secretary General.  
 (c) Administrative Officer.                      (d) Deputy General.
- 7. The United Nations was founded on**  
 (a) 24th October, 1945.                      (b) 30th October, 1945.  
 (c) 26th June, 1945.                      (d) 26th January, 1942.
- 8. Kofi Annan created the Global Fund to fight AIDS, tuberculosis and**

- (a) Diarrhea. (b) Daitigue. (c) Malaria. (d) Smallpox.

**9. The main objectives of International Atomic Energy Agency are to promote the peaceful use of**

- (a) Nuclear energy. (b) Global trade. (c) Military power. (d) Veto power.

**10. The more weightage to India's proposal for permanent membership in the Security Council is**

- (a) Nuclear capability. (b) Located in Asia.  
(c) India's membership in the UN. (d) India's growing economic power and stable political system.

**11. How many judges are there in the International Court of Justice?**

- (a) Fifteen judges (b) Sixteen judges (c) Seventeen judges (d) Eighteen judges

**12. How many non-permanent members does the UN Security Council have?**

- (a) Eight (b) Nine (c) Ten (d) Eleven

**13. Expand IAEA?**

- (a) International Atomic Energy Act (b) International Atomic Energy Accord  
(c) International Atomic Energy Agency (d) International Atomic Eastern Agency

**14. When was World Trade Organisation was set up?**

- (a) 1993 (b) 1994 (c) 1995 (d) 1996

**CHAPTER – 6 (Security in the Contemporary World)**

**1. India first tested nuclear device in-**

- (a) 1962. (b) 1970. (c) 1974. (d) 1998.

**2. Al-Qaeda is a group of \_\_\_\_\_.**

- (a) Islamic militants (b) Tamil militants (c) Sikh militants (d) Maoists

**3. The Anti-ballistic Missile Treaty was signed in**

- (a) 1969. (b) 1970. (c) 1971. (d) 1972.

**4. The Tutsi tribe are in**

- (a) Rwanda. (b) Uganda. (c) Nigeria. (d) Greece.

**5. Disarmament requires all states to give up certain kinds of**

- (a) Weapons. (b) Arms control. (c) Violence. (d) Internal wars.

**6. Poverty in South Asia has led to \_\_\_\_\_.**

- (a) Illiteracy (b) Population Explosion (c) Migration (d) Terrorism

**7. Global poverty is another source of:**

- (a) Insecurity. (b) Security. (c) Internal problem. (d) External threat.

**8. Human rights are classified into**

- (a) Three types. (b) Two types. (c) Four types. (d) One type.

**9. India conducted second nuclear test in:**

- (a) 1972 (b) 1985 (c) 1986 (d) 1998

**10. Al-Qaeda attacked America on which date?**

- (a) 11th September, 2001 (b) 11th September, 2002  
(c) 11th October, 2001 (d) 11th October, 2002

**11. Expand START.**

- (a) Strategic Arms Reduction Toll (b) Strategic Arms Reduction Treaty

(c) Strategic Arms Reduction Tactics (d) Strategic Arms Reduction Tax

**12. When was Nuclear Non-Proliferation Treaty signed?**

(a) 1966 (b) 1967 (c) 1968 (d) 1969

**13. \_\_\_\_\_ refers to political violence that targets civilians deliberately and indiscriminately.**

(a) Terrorism (b) Global security (c) Human security (d) None of the above

**14. \_\_\_\_\_ is that the greatest danger to a country is from military threats and danger of violence or the threat of violence inside its borders.**

(a) Terrorism (b) Security (c) Illiteracy (d) Migration

### **CHAPTER – 6 (Environment and Natural Resources)**

**1. The example of global common is**

(a) Gasoline pumps. (b) Giant oil refineries.  
(c) The ocean floor. (d) Chain of hotels.

**2. According to Kyoto Protocol, the major nations abide to reduce concentration of green house gases was by**

(a) 2008. (b) 2010. (c) 2012. (d) 2018.

**3. Progress that meets the needs of the present without compromising the ability of future generations to meet their own needs is:**

(a) The tragedy of global commons. (b) Sustainable development.  
(c) Development without Destruction. (d) The politics of the developed nations.

**4. Smog is a combination of**

(a) Air and water vapours. (b) Water and smoke. (c) Fire and water. (d) Smoke and fog.

**5. The multinational company Western Mining Corporation (WMC) belongs to**

(a) USA. (b) Australia. (c) UK. (d) New Zealand.

**6. The Constitution of India provides for the safeguard of cultural and educational rights of minorities under fundamental rights of Article**

(a) 20. (b) 23. (c) 28. (d) 29.

**7. WWF stands for**

(a) World Wild Foundation. (b) World Wildlife Federation.  
(c) World Wide Wildlife. (d) World Wildlife Fund.

**8. The Government of India refers indigenous people as**

(a) Scheduled tribes. (b) Refugee people. (c) Prisoners of war. (d) Outclass people.

**9. The animal that is the symbol of the World Wide wildlife Fund is:**

(a) Tiger. (b) Panda. (c) Hornbill. (d) White Bear.

**10. Main cause of extinction of species from tropics is**

(a) Soil erosion. (b) Pollution. (c) Deforestation. (d) Afforestation.

**11. What was the other name for the 1987 Brundtland Report?**

(a) Our Common Present (b) Our Common Future  
(c) Our Common Past (d) None of the above

**12. Expand UNFCCC?**

- (a) United Nations Framework Convention on Climate Change
- (b) United Nations Framework Counter on Climate Change
- (c) United Nations Framework Convention on Climate Call
- (d) United Nations Fast Convention on Climate Change

**13. India signed and ratified the 1997 Kyoto Protocol in:**

- (a) July 2002.
- (b) August 2002.
- (c) September 2002.
- (d) October 2002.

**14. The World Council of Indigenous Peoples was formed in:**

- (a) 1973
- (b) 1974
- (c) 1975
- (d) 1976

**Passage Based Questions**

**Read the following passage carefully and answer the questions:-**

Countries have conflicts and differences with each other. That does not necessarily mean they must go to war to deal with their antagonisms. They can instead discuss contentious issues and find peaceful solutions, indeed, even though this is rarely noticed most conflicts and differences are resolved without going to war. The role of an international organisation is not a super-state with authority over its members. It is created by and responds to states. It comes into being when states agree to its creation. Once created, it can help member states resolve their problems peacefully.

1. Is this necessary to engage into wars during conflicts among countries?
2. Is an international organisation a super state?
3. What is the significance of international organisation?

**Read the following passage carefully and answer the questions:**

By 2006, the UN had 192 member states. These included almost all independent states. In the UN General Assembly, all members have one vote each. In the UN Security Council, there are five permanent members. These are the US, UK, Russia, France, China. These states were selected as permanent members as they were most powerful immediately after the Second World War and because they constituted the victors in the war.

1. How many member states were there in the UN 2006?
2. Name five permanent members of UN Security Council.
3. Why these states were selected as permanent?

**Write answers of following IMPORTANT questions in notebook**

1. Briefly describe balance of power as a component of traditional security.
2. Analyze the non-traditional conception of security.
3. Define Globalisation. How has technology contributed to the growth of globalisation.
4. How has state capacity received a boost as a consequence of globalisation?
5. 'Welfare State is getting replaced by market'. Critically examine the statement.
6. Discuss in brief India's stand on environmental issues.
7. Identify and explain any four new sources of threat to security.
8. Explain any two effects of globalisation on the culture of a country.

9. "States have common but differentiated responsibilities towards environment" Analyse the statement giving suitable examples.

10. What are the objectives of military alliances? Give an example of a functioning military alliance with its specific objectives.

## HISTORY

**1. Identify the medieval globe-trotter with the help of the following information:**

- Before he set-off for India he made pilgrimage trips to Mecca before 1332-33 C.E.
- The Delhi Sultan Muhammad Bin Tughlaq made him Qazi or the judge of Delhi.

**Options:**

A. Abd-al-Razzak

B. Al-Biruni

C. Ibn Battuta

D. Seydi Ali Reis

**2. Consider the following:**

(1) Al-Biruni

(i) Rihla

(2) Ibn Battuta

(ii) Kitab-ul-Hind

(3) Francois Bernier

(iii) Travels in Mughal Empire

**Now, correctly match them.**

(a) 1 - (ii), 2(i), 3(iii)    (b) 1 (i), 2 (ii), 3-(iii)

(c) 1(iii), 2 (i), 3(iii)    (d) 1 (ii), 2- (iii), 3 (i)

**3. Match the following:**

**List-I**

(i) Manucci

(ii) Jean Baptist Tavernier

(iii) Duarte Barbosa

(iv) Abdur Razzak

**List-II**

(a) Samarqand

(b) Italy

(c) French

(d) Portuguese

**4. Ibn Battuta found Indian cities full of exciting opportunities. Identify the appropriate reason from the following options:**

(a) Large population, Bazaars and efficient communication

(b) Crown ownership of land

(c) Autonomous and equalitarian village command

(d) Traders exported gold and silver

**5. Who among the following developed the concept of the Asiatic mode of production?**

(a) Karl Marx (b) Voltaire (c) Montesquie (d) Rousseau

**6. Which of the following statements is appropriate about Ibn Battuta?**

(a) He was the Qazi during Muhammad Bin Tughlaq's empire.

(b) He had written Kitab-Ul-Hind in Arabic.

(c) He translated Sanskrit, Pali and Prakrit work in Arabic.

(d) He was a physician, philosopher and historian.

**7. Who among the following western theorists developed the idea of oriental despotism in the 19th century?**



- (a) Montesquieu
- (b) Rousseau
- (c) Voltaire
- (d) Karl Marx

**8. Consider the following statements and select the correct from the following options:**

- I. François Bernier was closely associated with the Prince Dara Shikoh.
- II. Bernier travelled to several parts of the country, and wrote accounts.
- III. He dedicated his major writing to the king of France and Aurangzeb.

**Options:**

- (a) II and III
- (b) III and IV
- (c) I and II
- (d) I and III

**9. Assertion (A):** As per Ibn Battuta, families kept at least one or two of female slaves as domestic labour.

**Reason (R):** The price of female slaves for domestic labour was very low.

**10. Assertion (A):** Al-Biruni wrote in English language.

**Reason (R):** He adopted a critical approach in his writings.

**11. Which one of the following countries did 'Afanasi Nikitin' belong to?**

- (a) Russia
- (b) Portugal
- (c) Spain
- (d) France

**12. Identify the British official with the help of the following information and select the correct option:**

- He was a Physician, came to India during 1794 to 1815.
- He served in the Bengal Medical Services.
- He served as Surgeon to the Lord Wellesley.
- He organised 'Calcutta Alipore Zoo'.

**Options:**

- (a) Marco Polo
- (b) Francis Buchanan
- (c) François Bernier
- (d) Colonel Meckenzie

**13. Read the source given below and answer the questions that follow:**

**A language with an enormous range**

Al-Biruni described Sanskrit as follows: If you want to conquer this difficulty (i.e. to learn Sanskrit), you will not find it easy, because the language is of an enormous range, both in words and inflections, something like the Arabic, calling one and the same thing by various names, both original and derivative, and using one and the same word for a variety of subjects, which, in order to be properly understood, must be distinguished from each other by various qualifying epithets.

**13.1 What motivated Al-Biruni to study Sanskrit ?**

**13.2. How did Al-Biruni's observations about Sanskrit contribute to cross cultural understanding?**

**13.3 In what ways Al-Biruni compare Sanskrit to Arabic?**

14. "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.
  15. "India had a unique system of communication during the 14th C." Examine the statement of Ibn Battuta.
  16. Mention Bernier's views on private property and crown ownership of land.
  17. Explain how the accounts of Ibn Battuta and Bernier provide us with tantalizing glimpses of the life of Indian women during the 16th and 17th centuries.
  18. "Ibn Battuta found Delhi as a city full of exciting opportunities." Support your answers with evidences given by him.
  19. "Bernier's description of imperial land ownership influenced western theorists like French philosopher Montesquieu and German Karl Marx." Justify it with suitable arguments.
- 

## **GEOGRAPHY**

### **Show your cartography skills**

- ❖ On Indian physical and political map: **(Paste in Notebook)**
  1. Rivers in India
  2. Soils in India
  3. Major crops wheat & rice growing areas
  4. Major Airports in India
  5. Major Seaport in India
  
- ❖ On world map:- **(Paste in Notebook)**
  1. Major Mountain ranges
  2. Hot & Cold Desert
  3. Grasslands of world
  4. Major Airports
  5. Major Seaports
  6. Largest country in each continent
  
- ❖ Read the chapter no 3 - Graphical representation of data (Book 3) Practical work in Geography(**Paste in Notebook**)
- ❖ **Do practice of these:-** Line graph , Polygraph , Simple bar graph, Line and Bar graph, Multiple bar diagram , Compound Bar Graph, Pie diagram, Map - Dot map , Choropleth Map,

## **SOCIOLOGY**

### **1. Prepare the Practical file for sociology external board practical. Guidelines for which are shared as under:**

#### **Practical File:**

- a. Prepare a project file (25 sheets approximately, A4 size sheets) on any social issue we are facing in our society or any other social problem.
- b. Carry out a research in a detailed manner using 20 interviews, questionnaire, direct or indirect observation.
- c. The file should contain all the necessary sub-topics including analysis.
- d. Click pictures wherever necessary and show bar diagrams for analysis of responses.

#### **Topics to be included while writing the content in the file:**

- Acknowledgement
- Certificate
- Index
- Introduction (explaining the topic well with sub headings)
- Statement of Purpose (what made one pick up a certain topic)
- Research Question or Hypothesis ( only one)
- Methodology (definition of the method chosen, why the method is appropriate for the topic chosen, advantages and disadvantages of the method)
- Support Material - Presentation of secondary evidence such a newspaper articles, magazines articles and so on.

#### **Following is the list of suggested topics:**

Choose any one from the below or select your own topic related to social life.

- Disintegration of joint family
- Cyber bullying
- Gender inequality
- Role of women in society
- Social change
- Child Labour
- Transgender

#### **Steps to be followed:**

- Select a topic from the above list or identify your own topic related with social life.
- Get your topic approved by the subject teacher.
- Start the research work.
- Research can be done from internet, newspaper, books, magazines television etc.
- Formulate the hypothesis.
- Prepare a rough draft of the matter to be written in final file.

- Prepare for verification of your hypothesis with the help of method chosen for research (interview, questionnaire, survey, observation etc. whichever suits your hypothesis.)
- Perform the verification task.
- Note the conclusion.
- Prepare the final file.

### **ASSESSMENT OF 20 MARKS IN THE FINAL BOARD PRACTICAL EXAMINATION.**

## **PSYCHOLOGY HOLIDAY HOMEWORK-XII**

**Written report of the following files to be completed:**

- (i) Case Study
- (ii) Practical file

### **HOLIDAY HOMEWORK ASSIGNMENT**

General Instructions:

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

#### **WEEK 1**

- Q1. Define self.(1)
- Q2. In value assessment we try to determine the \_\_\_\_\_ values of a person. (1)
- Q3. Define personality. (1)
- Q4. People who are confident, can solve problems, confront the things that frighten them and nurture themselves are all qualities of which Behavioural aspect of self. Write a note on it. (3)
- Q5. Rita is learning music. Many times, she has to miss her favourite serial as she has to go for music classes. Also, she wakes up early to practice despite her love her sleep. Which concept from the chapter self and personality can you link to this situation? (4)
- Q6. Which concept of self is based on Bandura's social learning theory? Write a note on it. (2)
- Q7. If a psychologist is evaluating you by asking your response to ink blots, which form of assessment is the psychologist using? List any two features of this form of assessment.(3)
- Q8. Is there difference between self-actualization and a fully functioning individual? Support your answer with the help of examples. (3)
- Q9. Distinguish between type and trait approach of personality. Give suitable examples. (6)
- Q10. What is meant by delay in gratification? Discuss the technique used for self-control. (4)

#### **WEEK 2**

- 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 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. The evidence for hereditary influences on intelligence comes mainly from studies of twins and adopted children. With respect to 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 home adopted into families of higher socio-economic status exhibit in a large increase in their intelligence scores. There is evidence that environmental deprivation lowers intelligence while rich nutrition, good family background and quality schooling increases intelligence. There is a general consensus among psychologists that intelligence is the product of 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 correlation between twins reared together (.60) and siblings reared together (.50) and sibling reared apart (.25) to share intelligence.
- As children grows in age, their\_\_\_\_\_ tends to closer to their adoptive parents.(1)
    - Moral value
    - Mental level
    - Intelligence level
    - All the above
  - Environmental deprivation lowers\_\_\_\_\_ (1)
    - Insight Ness
    - Intelligence
    - wisdom
    - None of the above
  - The evidence for the hereditary influences on intelligence comes mainly from(1)
    - studies of twins
    - studies of adopted children
    - both a & b
    - neither a & nor b
  - children from disadvantaged homes adopted into families of higher socio-economics status exhibit a large increase in their \_\_\_\_\_. (1)
    - educational status
    - intelligence scores
    - social status
    - All the above
- Q8. Rehaan is good at solving mathematical problems. Which intelligence according to Gardener would he excel in? Write the key characteristics of multiple intelligence. (4)
- Q9. How do Alfred Adler and Karen Horney Explain personality development? (4)

### WEEK 3

- Q1. Shweta has been writing for the school magazine and would like to pursue journalism.Which intelligence is her skill reflecting? (1)
- Q2. \_\_\_\_\_ are enduring beliefs about an ideal mode of behaviour. (1)
- Q3. High ability, creativity and commitment are found in individuals with which intelligence? (2)
- Q4. Does heredity influence intelligence? (2)
- Q5. Write a note on the test that can be given only to literate groups based on the type of items. (2)
- Q6. Shirin learnt an answer and was able to recall it exactly the way it had been learnt. According to Arthur Jensen what level of learning she is using? (2)
- Q7. Psychological attributes are multi-dimensional. Describe any three such attributes. (3)
- Q8. What are some of the erroneous practices associated with intelligence testing? (4) Q9. Which intelligence is associated with Indian culture? Write a detailed note on the same.( 4)
- Q10.Explain “Maslow’s humanistic approach keeping in mind an individual who is feeling low.( 4)

### WEEK 4

- Q1. A person having a \_\_\_\_\_sets a standard for guiding her/his actions in life and for judging others. (1)
- Q2. \_\_\_\_\_ refers to an individual’s underlying potential for acquiring skills. (1)

- Q3. Aditya has to interview, a famous politician on a live T.V. show. Which is the most appropriate type of interview he can use? (2)
- Q4. Why is emotional intelligence receiving increasing attention of educators? (2)
- Q5. Describe key feature of the case study method. (2)
- Q6. Angad has been the topper in a class. He went to the topmost college, where he was neither sensitive to his own self or to others. This led to problems in interpersonal relationships with reference to his condition. Explain the importance of the emotional intelligence in his life.( 2)
- Q7. Think of an international conflict. Suggest conflict resolution strategies for the same. (3)
- Q8. Explain the competencies of Indian notion of intelligence.( 4)
- Q9. How is aptitude different from intelligence? Explain how the PASS model helps us to understand intelligence. (4)
- Q10. Explain the relationship between creativity and intelligence. (4)
- Q11. Describe behavioural ratings used in the assessment of personality. Explain the major limitations in using these ratings. (6)
- Q12. According to Freud, individuals avoid anxiety by using mechanisms that protect the ego by distorting reality. What are these mechanisms called ? Explain its different kinds with the help of examples. (4)
- Q13. Anand wants to become musician even though he belongs to the family of doctors. He wishes to fulfil his potential. Using Carl Roger's terminology, describe this perspective as revealed by Anand's personality. (4)
- Q14. Describe Freud's psychosexual stages of personality development. (6)

## ASSIGNMENT CLASS XII DIFFERENTIATION

1. Find  $\frac{dy}{dx}$  for the following:

(a)  $y = \frac{1}{\sqrt{a^2 - x^2}}$

(b)  $y = \frac{5x}{\sqrt[3]{1-x^2}} + \sin^2(2x+3)$

(c)  $y = \frac{\cos x + \sin x}{\cos x - \sin x}$

(d)  $y = \log \sqrt{\frac{1+\cos^2 x}{1-e^{2x}}}$

(e)  $y = \log(x + \sqrt{1+x^2})$

(f)  $y = \sqrt{\frac{1-\sin 2x}{1+\sin 2x}}$

2. Show that  $\frac{d}{dx} \left[ \frac{x}{2} \sqrt{a^2 - x^2} + \frac{a^2}{2} \sin^{-1} \left( \frac{x}{a} \right) \right] = \sqrt{a^2 - x^2}$ .

3. If  $y = \sqrt{\frac{1-x}{1+x}}$ , prove that  $(1-x^2) \frac{dy}{dx} + y = 0$ .

4. If  $y = (x + \sqrt{x^2 + a^2})^n$ , prove that  $\frac{dy}{dx} = \frac{ny}{\sqrt{x^2 + a^2}}$ .

5. Find  $\frac{dy}{dx}$  for the following:

(a)  $\sin^{-1}(\cos x) + \cos^{-1}(\sin x)$

(b)  $\tan^{-1} \left( \frac{1 - \cos x}{\sin x} \right)$

(c)  $\tan^{-1} \left( \frac{\cos x - \sin x}{\cos x + \sin x} \right)$

(d)  $\tan^{-1} \left( \sqrt{\frac{1+\sin x}{1-\sin x}} \right)$

(e)  $\tan^{-1} \left( \frac{\sqrt{1+\sin x} + \sqrt{1-\sin x}}{\sqrt{1+\sin x} - \sqrt{1-\sin x}} \right)$

6. Find  $\frac{dy}{dx}$  for the following:

(a)  $\cos^{-1}(4x^3 - 3x)$

(b)  $\cot^{-1} \left( \frac{1-x}{1+x} \right)$

(c)  $\tan^{-1} \left( \frac{\sqrt{1+x^2} - 1}{x} \right)$

(d)  $\tan^{-1} \left( \frac{\sqrt{1+x^2} - \sqrt{1-x^2}}{\sqrt{1+x^2} + \sqrt{1-x^2}} \right)$

(e)  $\sin^{-1} \left( \frac{5x + 12\sqrt{1-x^2}}{13} \right)$

7. If  $\sqrt{1-x^2} + \sqrt{1-y^2} = a(x-y)$ , prove that  $\frac{dy}{dx} = \sqrt{\frac{1-y^2}{1-x^2}}$ .

8. If  $y = \sqrt{x} + \frac{1}{\sqrt{x}}$ , prove that  $2x \frac{dy}{dx} + y = 2\sqrt{x}$ .

9. If  $y\sqrt{x^2+1} = \log(\sqrt{x^2+1} - x)$ , show that  $(x^2+1) \frac{dy}{dx} + xy + 1 = 0$ .

10. If  $y \log x = x - y$ , prove that  $\frac{dy}{dx} = \frac{\log x}{(1 + \log x)^2}$ .

11. If  $\log(\sqrt{x^2 + y^2}) = \tan^{-1} \frac{y}{x}$ , prove that  $\frac{dy}{dx} = \frac{x + y}{x - y}$ .

12. If  $y = \frac{\sin^{-1} x}{\sqrt{1 - x^2}}$ , prove that  $(1 - x^2) \frac{dy}{dx} = xy + 1$ .

13. If  $y = x^{\cos x} + \cos x^{\sin x}$ , find  $\frac{dy}{dx}$ .

14. If  $x^a y^b = (x + y)^{(a+b)}$ , prove that  $\frac{dy}{dx} = \frac{y}{x}$ .

15. If  $f(x) = \left(\frac{3+x}{1+x}\right)^{2+3x}$ , find  $f'(0)$ .

16. Differentiate  $\tan^{-1}\left(\frac{2x}{1-x^2}\right)$  w.r.t.  $\sin^{-1}\left(\frac{2x}{1+x^2}\right)$ .

17. If  $x = a \sin 2t(1 + \cos 2t)$ ,  $y = b \cos 2t(1 - \cos 2t)$ , show that  $\left(\frac{dy}{dx}\right)_{at=\frac{\pi}{4}} = \frac{b}{a}$ .

18. If  $x = a\left(\frac{1+t^2}{1-t^2}\right)$ ,  $y = \frac{2t}{1-t^2}$ , show that  $\frac{dy}{dx} = \frac{1+t^2}{2at}$ .

19. If  $x = 2 \cos \theta - \cos 2\theta$  and  $y = 2 \sin \theta - \sin 2\theta$ , find  $\left(\frac{d^2y}{dx^2}\right)_{\theta=\frac{\pi}{2}}$ .

20. If  $y = A \cos nx + B \sin nx$ , prove that  $\frac{d^2y}{dx^2} + n^2 y = 0$ .

21. If  $y = e^x (\sin x + \cos x)$ , prove that  $\frac{d^2y}{dx^2} - 2 \frac{dy}{dx} + 2y = 0$ .

22. If  $y = \tan^{-1} x$ , show that  $(1 + x^2) \frac{d^2y}{dx^2} + 2x \frac{dy}{dx} = 0$ .

23. If  $y = \left[\log(x + \sqrt{x^2 + 1})\right]^2$ , show that  $(1 + x^2) \frac{d^2y}{dx^2} + x \frac{dy}{dx} = 2$ .



### Application of Derivatives

1. Water is dripping out from a conical funnel of semi vertical angle  $\frac{\pi}{4}$  at a uniform speed of  $2 \text{ cm}^3 / \text{sec}$  through a tiny hole at the vertex of the bottom. When the slant height of water is 4cm , find the rate of decrease of slant height of the water.
  2. A man is moving away from a tower 49.6 m high at the rate of 2 m/s. Find the rate at which the angle of elevation of the top of the tower is changing, when he is at a distance of 36 m from the foot of the tower. Assume that the eye level of the man is 1.6 m from the ground.
  3. Evaluate following up to three decimal places using differentiation:  
 $\sqrt{25.2}$ ,  $\sqrt[3]{29}$  ,  $\sqrt{0.037}$
  4. Find the intervals in which the function  $f(x) = \log(1+x) - \frac{2x}{2+x}$  is increasing or decreasing.
  5. Find the intervals in which the function  $f(x) = (x+1)^3 (x-3)^3$  is increasing or decreasing. Also find the points at which the function has local maxima, local minima and the point of inflexion.
  6. Find all the points of local maximum and minimum and the corresponding maximum and minimum values of the following function  $\frac{3}{4}x^4 - 8x^3 + \frac{45}{2}x^2 + 105$ .
  7. Find the point on the curve  $y^2 = 4x$  which is nearest to the point  $(2, -8)$
  8. Find the equation of the tangent to the curve  $y = (x^3 - 1)(x - 2)$  at the points where the curve cuts the x-axis.
  9. Find the intervals in which the function  $f(x) = 2x^3 - 9x^2 + 12x + 15$  is increasing and decreasing.
  10. Separate  $\left[0, \frac{\pi}{2}\right]$  into sub intervals in which  $f(x) = \sin^4 x + \cos^4 x$  is increasing or decreasing.
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11. Find the points of local maxima and local minima and also the local maximum and local minimum values of the following functions : (i)  $f(x) = 2\cos x + x, x \in (0, \pi)$   
(ii)  $f(x) = 2\sin x - x, x \in \left[-\frac{\pi}{2}, \frac{\pi}{2}\right]$
12. Find the equation of the tangent and normal to the curve  
 $x = 1 - \cos \theta, y = \theta - \sin \theta$  at  $\theta = \frac{\pi}{4}$
13. Prove that the radius of the right circular cylinder of greatest curved surface area which can be inscribed in a given cone is half of that of cone.
14. An open box with a square base is to be made of given iron sheet of area 27 sq.m. Show that the maximum volume of the box is 13.5 cu. m.
15. Show that the triangle of maximum area that can be inscribed in a given circle is an equilateral triangle.
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## ASSIGNMENT CLASS XII INDEFINITE INTEGRALS

Evaluate the following Integrals:

1.  $e^{x \log a} + e^{a \log x} + e^{a \log a}$
2.  $\frac{1}{1 + \cos x}$
3.  $\frac{\sin x}{1 + \sin x}$
4.  $\tan^{-1}(\sec x + \tan x)$
5.  $\frac{\sin^6 x + \cos^6 x}{\sin^2 x \cos^2 x}$
6.  $\tan^{-1} \sqrt{\frac{1 - \sin x}{1 + \sin x}}$
7.  $\frac{1}{\sqrt{3x+4} - \sqrt{3x+1}}$
8.  $\frac{x^3}{x+2}$
9.  $\sin^3 x \cos^3 x$
10.  $\cos^4 x$
11.  $\cos 2x \cos 4x$
12.  $\frac{x^4 + 3}{x^2 + 1}$
13.  $\sin 4x \cos 7x$
14.  $\frac{1 + \cos x}{1 - \cos x}$
15.  $\frac{e^x - e^{-x}}{e^x + e^{-x}}$
16.  $\frac{\sin 2x}{a^2 \sin^2 x + b^2 \cos^2 x}$
17.  $\frac{\sin x}{\sin(x-a)}$
18.  $\frac{1}{\sin(x-a) \sin(x-b)}$
19.  $\frac{1 - \cot x}{1 + \cot x}$
20.  $\frac{1}{e^x + 1}$
21.  $\frac{1}{\sqrt{x}(\sqrt{x} + 1)}$
22.  $\frac{\sin 2x}{(a + b \cos x)^2}$
23.  $\frac{\sec^2(2 \tan^{-1} x)}{1 + x^2}$
24.  $\sin^2 x \cos^5 x$
25.  $\sin^5 x$
26.  $\tan^3 x$
27.  $\left(\frac{x+1}{x}\right)(x + \log x)^2$
28.  $\frac{\cos^5 x}{\sin x}$
29.  $\frac{1}{\sqrt{9 - 25x^2}}$
30.  $\frac{x^4 + 1}{x^2 + 1}$
31.  $\frac{1}{3 + 2x - x^2}$
32.  $\frac{1}{x^2 + 8x + 20}$
33.  $\frac{e^x}{e^{2x} + 6e^x + 5}$
34.  $\frac{1}{x(x^n + 1)}$
35.  $\frac{x}{x^4 - x^2 + 1}$
36.  $\frac{1}{\sqrt{9 + 8x - x^2}}$
37.  $\frac{1}{\sqrt{16 - 6x - x^2}}$
38.  $\frac{2x}{\sqrt{1 - x^2 - x^4}}$
39.  $\frac{2x - 3}{x^2 + 3x - 18}$
40.  $\frac{2 \sin 2\phi - \cos \phi}{6 - \cos^2 \phi - 4 \sin \phi}$
41.  $\frac{x + 2}{2x^2 + 6x + 5}$
42.  $\frac{x^2}{x^2 + 6x + 12}$
43.  $\sqrt{\frac{a-x}{a+x}}$
44.  $\frac{3x + 1}{\sqrt{5 - 2x - x^2}}$
45.  $\frac{1}{a^2 \sin^2 x + b^2 \cos^2 x}$
46.  $\frac{\sin x}{\sin 3x}$
47.  $\frac{1}{2 - 3 \cos 2x}$
48.  $\frac{\sin 2x}{\sin^4 x + \cos^4 x}$
49.  $\frac{1}{1 - 2 \sin x}$
50.  $\frac{1}{5 + 4 \cos x}$
51.  $\frac{1}{3 + 2 \sin x + \cos x}$
52.  $\frac{3 \sin x + 2 \cos x}{3 \cos x + 2 \sin x}$
53.  $(\log x)^2$
54.  $\sin^{-1} x$
55.  $\frac{x - \sin x}{1 - \cos x}$
56.  $\sec^3 x$

57.  $\frac{\sin^{-1} x}{(1-x^2)^{3/2}}$       58.  $x^2 \tan^{-1} x$       59.  $\tan^{-1}\left(\frac{2x}{1-x^2}\right)$       60.  $\frac{\sin^{-1} x}{x^2}$
61.  $e^x \left(\frac{1-\sin x}{1-\cos x}\right)$       62.  $\frac{\log x}{(1+\log x)^2}$       63.  $\frac{2-x}{(1-x)^2} e^x$       64.  $\frac{1}{\log x} - \frac{1}{(\log x)^2}$
65.  $e^{ax} \cos bx$       66.  $\sqrt{7x-10-x^2}$       67.  $\frac{\sqrt{16+(\log x)^2}}{x}$       68.  $(3x-2)\sqrt{x^2+x+1}$
69.  $(x+1)\sqrt{1-x-x^2}$       70.  $\frac{2x-1}{(x-1)(x+2)(x-3)}$       71.  $\frac{1}{\sin x - \sin 2x}$       72.  $\frac{3x+1}{(x-2)^2(x+2)}$
73.  $\frac{8}{(x+2)(x^2+4)}$       74.  $\frac{x^2}{(x^2+1)(x^2+4)}$       75.  $\frac{\tan \theta + \tan^3 \theta}{1 + \tan^3 \theta}$       76.  $\frac{\sin 2x}{(1+\sin x)(2+\sin x)}$
77.  $\frac{1}{x(x^5+1)}$       78.  $\frac{x^2-1}{x^4+x^2+1}$       79.  $\frac{x^2+4}{x^4+16}$       80.  $\frac{1}{x^4+1}$
81.  $\sqrt{\tan x}$       82.  $\sqrt{\cot x}$       83.  $\frac{1}{\sin^4 x + \cos^4 x}$       84.  $\frac{x^2-1}{x^4+1}$
85.  $\frac{1}{(x-3)\sqrt{x+1}}$       86.  $\frac{1}{(x^2-4)\sqrt{x+1}}$       87.  $\frac{1}{(x+1)\sqrt{x^2-1}}$       88.  $\frac{1}{x^2\sqrt{1+x^2}}$
89.  $\frac{x}{x^3+x^2+x+1}$       90.  $\frac{\sin(x-\alpha)}{\sin(x+\alpha)}$       91.  $\frac{(x+1)e^x}{(x+2)^2}$       92.  $\frac{1-\tan x}{x+\log(\cos x)}$
93.  $\frac{\sqrt{x^2+a^2}}{x}$       94.  $\frac{e^x}{\sqrt{5-4e^x-e^{2x}}}$       95.  $\frac{1}{x^4-5x^2+16}$       96.  $\sqrt{1+2\tan x(\sec x + \tan x)}$
97.  $e^{\sqrt{x}} \frac{\cos e^{\sqrt{x}}}{\sqrt{x}}$       98.  $\cos(\log x)$       99.  $\frac{2\sin 2\theta - \cos \theta}{6 - \cos^2 \theta - 4\sin \theta}$       100.  $\tan^{-1}\left(\sqrt{\frac{1-\cos 2x}{1+\cos 2x}}\right)$

## ASSIGNMENT CLASS XII DEFINITE INTEGRALS

*Evaluate the following:*

1.  $\int_0^{\pi/2} \cos^3 x \, dx$
2.  $\int_0^{\pi/4} \sqrt{1 - \sin 2x} \, dx$
3.  $\int_0^4 \frac{1}{\sqrt{x^2 + 2x + 3}} \, dx$
4.  $\int_0^1 \frac{2x}{5x^2 + 1} \, dx$
5.  $\int_1^2 \frac{\log x}{x^2} \, dx$
6.  $\int_1^2 \frac{1}{x(1+x^2)} \, dx$
7.  $\int_{\pi/4}^{\pi/2} \cos 2x \log \sin x \, dx$
8.  $\int_1^2 \left( \frac{x-1}{x^2} \right) e^x \, dx$
9.  $\int_0^{\pi/2} \frac{\cos \theta}{(1 + \sin \theta)(2 + \sin \theta)} \, d\theta$
10.  $\int_0^{1/\sqrt{2}} \frac{\sin^{-1} x}{(1-x^2)^{3/2}} \, dx$
11.  $\int_0^{\pi/2} \cos^4 x \, dx$
12.  $\int_0^{\pi/2} (\sqrt{\tan x} + \sqrt{\cot x}) \, dx$
13.  $\int_0^{\pi} \frac{1}{5 + 4 \cos x} \, dx$
14.  $\int_0^{\pi/2} \frac{1}{2 \cos x + 4 \sin x} \, dx$
15.  $\int_0^{\pi/2} \frac{\cos x}{3 \cos x + \sin x} \, dx$
16.  $\int_0^{\pi/2} \frac{\sin 2x}{\sin^4 x + \cos^4 x} \, dx$
17.  $\int_0^1 \frac{e^x}{1+e^{2x}} \, dx$
18.  $\int_0^1 \frac{\sqrt{\tan^{-1} x}}{1+x^2} \, dx$
19.  $\int_0^{\pi/4} \sec^4 x \, dx$
20.  $\int_0^1 \sqrt{\frac{1-x}{1+x}} \, dx$
21.  $\int_1^2 \frac{1}{x(1+\log x)^2} \, dx$
22.  $\int_0^{\pi} |\cos x| \, dx$
23.  $\int_{-1}^1 e^{|x|} \, dx$
24.  $\int_{-1}^1 f(x) \, dx$ , where  $f(x) = \begin{cases} 1-2x & x \leq 0 \\ 1+2x & x \geq 0 \end{cases}$
25.  $\int_0^3 [x] \, dx$
26.  $\int_0^2 [x^2] \, dx$
27.  $\int_{-1}^1 |2x+1| \, dx$
28.  $\int_{-\pi/2}^{\pi/2} (\sin |x| + \cos |x|) \, dx$
29.  $\int_{-\pi/4}^{\pi/4} |\sin x| \, dx$
30.  $\int_1^2 \frac{\sqrt{x}}{\sqrt{3-x} + \sqrt{x}} \, dx$
31.  $\int_0^{\pi/2} \frac{\sin x}{\sin x + \cos x} \, dx$
32.  $\int_0^{\pi/2} \frac{\sin^2 x}{\sin x + \cos x} \, dx$
33.  $\int_0^{\pi/2} \frac{\sin^n x}{\sin^n x + \cos^n x} \, dx$
34.  $\int_0^{\pi/2} \sin 2x \log(\tan x) \, dx$
35.  $\int_{-\pi/4}^{\pi/4} x^3 \sin^4 x \, dx$
36.  $\int_{-a}^a \sqrt{\frac{a-x}{a+x}} \, dx$
37.  $\int_0^{\pi} \frac{x \tan x}{\sec x \cos ex} \, dx$
38.  $\int_0^1 \cot^{-1}(1-x+x^2) \, dx$
39.  $\int_{-1}^1 \log \left( \frac{2-x}{2+x} \right) \, dx$
40.  $\int_0^1 \sin^{-1} \left( \frac{2x}{1+x^2} \right) \, dx$
41.  $\int_0^1 \frac{\log(1+x)}{1+x^2} \, dx$
42.  $\int_0^1 \cos^{-1} \left( \frac{1-x^2}{1+x^2} \right) \, dx$
43.  $\int_0^{\pi/2} \frac{1}{1+\sqrt{\cot x}} \, dx$
44.  $\int_0^{\infty} \frac{x(\tan^{-1} x)^2}{(1+x^2)^{3/2}} \, dx$
45.  $\int_0^{\pi/2} x^2 \cos 2x \, dx$
46.  $\int_{-\infty}^{\infty} \frac{1}{9+x^2} \, dx$
47.  $\int_0^1 x \sqrt{\frac{1-x^2}{1+x^2}} \, dx$
48.  $\int_0^{\pi/2} \frac{1}{1+\tan^3 x} \, dx$
49.  $\int_0^1 x(1-x)^5 \, dx$
50.  $\int_0^a \frac{1}{x+\sqrt{a^2-x^2}} \, dx$
51.  $\int_0^{\infty} \frac{1}{(x^2+a^2)(x^2+b^2)} \, dx$
52.  $\int_0^{2\pi} e^x \cos \left( \frac{\pi}{4} + \frac{x}{2} \right) \, dx$