

General Instructions:

- (i) This paper is divided into three Sections: A, B and C. All the sections are compulsory.
 - (ii) Read the instructions carefully.
 - (iii) Do not exceed the prescribed word limit while answering the questions.
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SECTION – A (READING) 20 Marks

1. Read the following passage carefully.

(10 Marks)

INDOOR POLLUTANTS

1. Call it a blessing or a curse of Mother Nature, we have to breathe in over 10,000 litres of air in a day (more than four million litres in a year) to remain alive. By making it essential for life, God has wished that we try to keep the air we breathe clean. Everyone can see the food that is not clean and perhaps refrain from eating it, but one cannot stop breathing even if one can feel the air to be polluted.
2. Several harmful and noxious substances can contaminate the air we breathe. Generally, much is said and written about outdoor air pollution, most of which is due to vehicular and industrial exhausts.
3. Given the fact that most of us spend over 90% of our time indoors, it is most important to recognise that the air we breathe in at home or in offices can be polluted. It can be a cause of ill-health. Air pollutants that are generally present in very low concentrations can assume significance in closed ill-ventilated places.
4. The indoor air pollution can lead to allergic reactions and cause irritation to the skin, the eyes and the nose. But as is logical to assume, the brunt of insult by pollutants is borne by the lungs. It can lead to the development of fresh breathing problems, especially in those who have allergic tendencies, or it can worsen the existing respiratory illnesses like asthma and bronchitis.
5. There can be several sources of indoor air pollution. Tobacco smoke is one of the most important air pollutants in closed places. "Passive smoking" or environmental tobacco smoke (ETS) pollution can lead to all the harmful effects of tobacco smoking seen in the smokers in their non-smoking companions. ETS as a health hazard has been unequivocally proven and is also getting social recognition now. One can occasionally see signs displaying the all-important message: "Your smoking is injurious to my health" in offices and homes. The children of smoking parents are among the worst affected persons.
6. The exposure of young children to ETS leads to increased respiratory problems and hospital admissions as compared to non-exposed children. Several studies, including those done at the PGI, have shown an increased risk of lung cancer among women exposed to passive smoking. ETS also worsens the existing lung diseases like asthma and bronchitis. It may be responsible for the development of asthma in children.
7. The next most important source of indoor air pollution is the allergens. House dust mites (HDM) are very small insects not visible to the naked eye and are the commonest source of allergy in the house. They are ubiquitous and thrive in a warm and moist atmosphere. They breed very fast and are very difficult to eradicate. Modern houses present ample breeding spaces for them in the form of carpets, curtains, mattresses, pillows, etc.
8. Exposure to HDM can be prevented by the frequent washing of linen and by encasing the mattresses and pillows in a non-permeable cover. Pets form an important part of life for some of us. But they can add plenty of allergens to our indoor atmosphere. Cats are notorious for

doing this. Fine particles from feline fur can remain stuck to the upholstery and carpets for a long time* even after the removal of the animal and lead to the worsening of asthma and skin allergies. Fortunately, owing to religious and social customs cats are not very popular pets in India. Dogs, however, are quite popular and can be as troublesome. Pets should be kept out of the bedrooms and washed frequently. To remove the fur particles, one has to use vacuum cleaners as the ordinary broom and mop are not effective.

9. Moulds, fungi and several other microorganisms thrive in damp conditions and can lead to allergies as well as infections. Humidifiers in the air-conditioning plants provide an ideal environment for certain types of bacteria and have led to major outbreaks of pneumonia. It is important to clean regularly the coolers, air-conditioners and damp areas of the house such as cupboards, lofts, etc to minimise this risk.
10. Toxic gases can also pollute the indoor environment. Biomass fuels (wood, cowdung, dried plants) and coal, if burned inside, can lead to severe contamination by carbon monoxide (CO): The poor quality of stoves and other cooking or heating appliances that cause incomplete combustion of LPG can also lead to the emission of CO or nitrogen dioxide. Formaldehyde (a gas) can be released from adhesives that are used for fixing carpets, upholstery and also in making plywood and particleboard.
11. The gases are very toxic in high concentrations as may be encountered during industrial accidents, but even in very minimal amounts, as may be prevalent in homes and offices, they can cause irritation to the skin or the eyes, rashes, headache, dizziness and nausea. Improving the ventilation is an important preventive measure, besides trying to eliminate the source that may not be always feasible.
12. Other indoor pollutants are toxic chemicals like cleansing agents, pesticides, paints, solvents and inferior-quality personal-care products, especially aerosols. Very old crumbling pipes, boilers, insulation or false roofing can also be important sources. Asbestos is a hazardous product that can cause cancer in humans.
13. It is important to realise that the air we breathe at home may not be clean always and we must try to eliminate the source of pollution. We should give due consideration to ventilation.

A. Choose the most appropriate option:

(1x4=4)

(a) The Almighty wants that human beings.....

- | | |
|------------------------------------|---|
| 1. should try to breathe clean air | 2. should not pay attention to pollutants |
| 3. must ignore ETS | 4. should become passive smokers |

(b) The toxic gases cause

- | | |
|--------------|---------------------|
| 1. rashes | 2. headache |
| 3. dizziness | 4. all of the above |

(c) Air conditioning plants become the cause of

- | | |
|-----------------|--------------|
| 1. allergies | 2. pneumonia |
| 3. heart attack | 4. infection |

(d) Asbestos is a hazardous product because it can

- | | |
|--------------------------------|-------------------------------|
| 1. cause cancer in humans | 2. cause respiratory problems |
| 3. prove fatal to the children | 4. none of these |

B. Answer the following questions briefly:

(1x4=4)

(a) What is essential for our life? How?

(b) Why should we pay attention to the quality of air we breathe indoor?

(c) Name any four sources of indoor air pollution.

(d) What do you understand by ETS? How is it harmful? Give two instances.

C. Find words in the passage similar in meaning as:

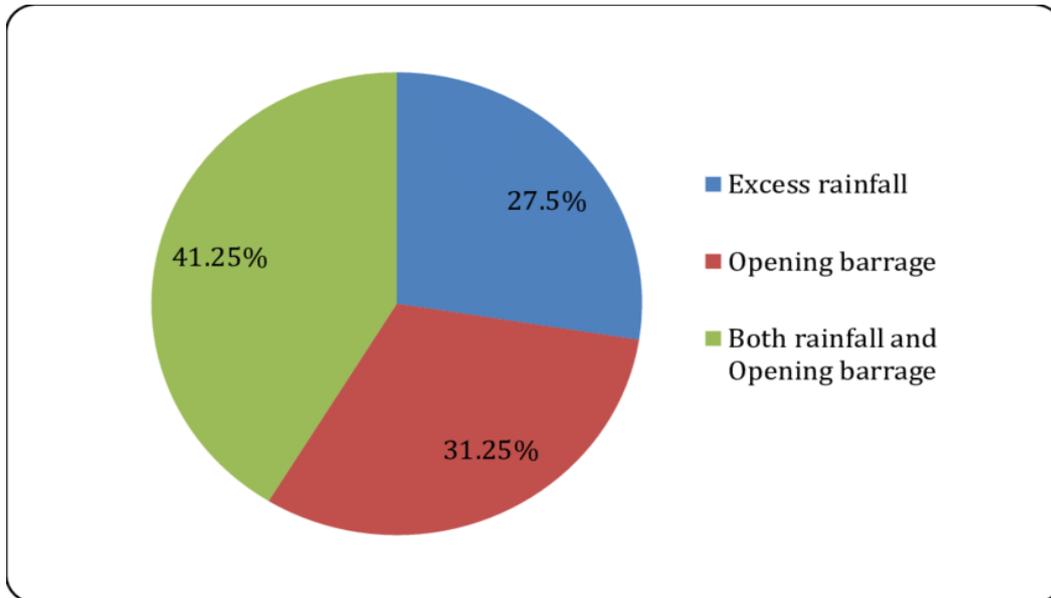
(1x2=2)

(a) make impure (Para 2)

(b) clearly and unmistakably (Para 5)

2. Read the passage carefully:

1. The National Disaster Management Authority has recently released guidelines on the management of urban flooding. It clearly states that urban flooding should be treated as a separate disaster as the causes of urban flooding and the strategies to deal with them are different.
2. Even though urban flooding has been experienced for decades in India sufficient attention was not given to plan specific efforts to deal with it holistically. In the past, any strategy on Flood Disaster Management largely focused on riverine floods affecting large tracts of rural areas.
3. Urban Flooding is significantly different from rural flooding as urbanisation leads to developed catchments which increases the flood peaks by up to 8 times and flood volumes up to 6 times. Consequently, flooding occurs very quickly due to faster flow times, sometimes in matter of minutes.
4. Urban areas are centres of economic activities with vital infrastructure which needs to be protected 24 x 7. In most of the cities, damage to vital infrastructure has a bearing not only locally but could even have global implications.
5. Urban areas are also densely populated and people living in vulnerable areas, both rich and poor, suffer due to flooding. It has sometimes resulted in loss of life, damage to property and disruptions in transport and power bringing life to a grinding halt causing untold misery and hardships. Even the secondary effects of subsequent epidemics and exposure to infection often takes further toll in terms of loss of livelihood, human suffering, and, in extreme cases, loss of life. Therefore, management of urban flooding has to be accorded top priority.
6. There has been an increasing trend of urban flood disasters in India over the past several years. Almost every major city in India has been severely affected. Mumbai floods of July 2005 turned out to be an eye opener. The deluge of rains in the catchment areas of the Yamuna during August and September in 2010 has inundated many villages and towns of Haryana, besides threatening the low-lying areas of the Delhi, the national capital. The fury of floods did not spare many areas of Uttar Pradesh and Uttarakhand.
7. Storm Water Drainage systems in the past were designed for a rainfall intensity of 12-20 mm/h. However, we have been experiencing rainfall of higher intensities in most of our cities every year, which overwhelm the SWD system. Moreover, the systems very often do not work to the designed capacities because of encroachments, dumping of solid waste and poor operations and maintenance.
8. Improper disposal of solid waste, including domestic, commercial and industrial waste and dumping of construction debris into the drains also contributes significantly to reducing their capacities. Everybody is responsible for this.
9. Encroachments are a major problem in many cities and towns all over the country. With large scale encroachments on the natural drains and in the floodplains, the capacity of the natural drain has decreased, resulting in flooding even with lower intensities of rainfall.



Reason for Urban Flood

On the basis of your reading of the above passage and the visual input given answer any 10 of the following questions: (1x10=10)

(a) Urban flooding is to be treated as a separate disaster because.....

1. the problems of urban areas are unique
2. urban areas get flooded easily
3. the causes of urban flooding are different
4. urban and riverine flooding are similar

(b) Urban flooding occurs very quickly as.....

1. the drainage is usually blocked
2. storm water drainage is poor
3. encroachments obstruct flow of water
4. developed catchments increase faster flow times

(c) Urban areas need a round the clock vigil because.....

1. they are centres of economic activities with vital infrastructure
2. they are the hubs of commerce and industry
3. they contain educational institutions and hospitals
4. they provide rail/road links to the rural areas

(d) Life comes to a grinding halt in a flooded urban centre as.....

1. people are vulnerable to deep water flowing fast
2. transport and power are disrupted
3. there is a loss of life and damage to property
4. people face hardships and untold misery

(e) Encroachment on natural drains intensify flooding because.....

1. these divert the flow of water
2. these cause whirls and speed up flow
3. these decrease the capacity of drain
4. these obstruct the smooth flow of water.

(f) The word 'overwhelm' in para 7 means.....

1. stunned
2. flooded
3. Overpowered
4. Defeated

(g). ----- percentage of the respondents stated that both rainfall and upstream barrage was the main reason for flood.

1. 41.25%
2. 31.25%
3. 27.5%
4. None of the above.

(h) 27.5 % mentioned that ----- was the major reason for seasonal flood.

1. Upstream barrage
2. excess rainfall
3. drought
4. none of the above

(i) How does flood in urban areas affect life?

1. disrupt transport
2. untold misery and hardships
3. disrupt communication
4. all of the above

(j) The main cause of intensifying floods in- urban areas is -----

1. encroachment on natural drains
2. over population
3. drought
4. none of the above

(k) Give the word similar in meaning to these words Basic system and service (para 4).

1. implications
2. infrastructure
3. vital
4. none of the above.

(l) Rural flooding occurs ----- compared to urban flooding.

1. very slowly
2. same as
3. very quickly
4. none of the above.

SECTION B ADVANCED WRITING SKILLS (20 marks)

3. You are Rahul /Rashmi. As President of the Literary Club of your school; you have organised an inter-school debate competition on the occasion of the Silver Jubilee celebrations of your school. Write a **Notice** in about 50 words, informing the students of your school about the competition. **(5 Marks)**

4. You are Prof. N. Dutta, a famous historian from Kurukshetra University. You have the honour of being invited as the chief guest at a public function. However, due to sudden illness you are unable to attend the same. Draft a suitable reply in about 50 words. **(5 Marks)**
5. You have noticed many stray animals on the road during the busy hours of the day. These animals have caused traffic jam as well as accidents. You have already written to the concerned authorities but no action has been taken so far. So, write a **letter to the Editor** of a leading newspaper telling him about the nuisance created by the stray animals. Sign your name as Preetil Krishnan, C/5, Assam. **(5 Marks)**
6. You are Dikshit, a sportsman, you are worried about the decreasing interest of students in sports and games. **Write an article** in 120-150 words to be published in a magazine on the need for sports and games. You are Amit/Anita. Use the hints given below. **(5 Marks)**
- sitting most of the time
 - excessive use of internet
 - most don't walk to the school
 - more importance to examination results

OR

You had attended a workshop on personality development for students. Many eminent personalities had been present. Write a report in 125-150 words on how the workshop proved to be beneficial. You are Rajesh/Rajshree.

SECTION C: LITERATURE (40 marks)

7. Read the extract given below and answer the questions that follow:

A. A thing of beauty is a joy forever **(6x1=6)**
 Its loveliness increases, it will never
 Pass into nothingness, but will keep
 A bower quiet for us, and asleep
 Full of sweet dreams, and health, and quiet breathing.

- i. Name the poem and the poet.
- ii. How is a thing of beauty a joy forever?
- iii. What do you understand by a 'bower'?
- iv. What kind of a sleep does it provide?
- v. Identify the Poetic Device in 'A bower quiet for us'
- vi. What does 'never pass into nothingness' mean?
 (a) It is internal (b) It is external (c) It is sentimental (d) It is eternal

B. Early this year, I found myself aboard a Russian research vessel the Akademik Shokalskiy heading towards the coldest, driest, windiest continent in the world: Antarctica. My journey began 13.09 degrees north of the Equator in Madras, and involved crossing nine time zones, six checkpoints, three bodies of water, and at least as many ecospheres. **(1x4=4)**

- i) Name the chapter.

a. Evans Tries an O Lev	b. Memories of Childhood
c. The Tiger King	d. Journey to the End of the Earth
- ii) Who is 'I' in the above lines?
 a. Tishani Doshi b. Kalki c. Pearl S Buck d. William Saroyan

iii) What was Akademik Shokalskiy?

- a. A Boat b. A Canoe c. A Watercraft d. All of these

iv) Where was the narrator travelling to?

- a. Amsterdam b. Antarctica c. Australia d. America

C. Since its invention a little over 130 years ago, the interview has become a commonplace of journalism. Today, almost everybody who is literate will have read an interview at some point in their lives, while from the other point of view, several thousand celebrities have been interviewed over the years, some of them repeatedly. So, it is hardly surprising that opinions of the interview - of its functions, methods and merits - vary considerably. Some might make quite extravagant claims for it as being, in its highest form, a source of truth, and, in its practice, an art. Others, usually celebrities who see themselves as its victims, might despise the interview as an unwarranted intrusion into their lives, or feel that it somehow diminishes them, just as in some primitive cultures it is believed that if one takes a photographic portrait of somebody then one is stealing that person's soul. V. S. Naipaul 1 'feels that some people are wounded by interviews and lose a part of themselves,' Lewis Carroll, the creator of Alice in Wonderland, was said to have had 'a just horror of the interviewer' and he never consented to be interviewed.

i. Why do most celebrity writers despise being interviewed?

(1x6=6)

ii. What is the primitive view about being photographed?

- a) person's soul is stolen b) part of personality is lost
c) person can be commanded d) All these

iii. What does V.S. Naipaul feel about interviews?

- a) horror b) happy c) wounded d) none

iv. Who is the author of The Interview?

- a) Christopher Silver b) William Silvester
c) Christopher Silvester d) None of these

v. What does the word 'Intrusion' mean?

- a) Interference b) Entrance by Force
c) Entrance without permission d) All of these

vi. Who of the following had the fear of interviewer?

- a) V.S Naipaul b) Rudyard Kipling
c) Lewis Carroll d) Carlos Braithwaite

8. Answer **any Five** of the following in about 40-50 words:

(5x2=10)

(i) For Franz, what was much more tempting than going to school and why?

(ii) What lesson did Douglas learn when he got rid of his fear of water?

(iii) What is Saheb looking for in the garbage dumps? Where is he and where has he come from?

(iv) Do you think Umberto Eco likes being interviewed? Give reasons for your opinion.

(v) Who is the owner of Ramsjo Ironmill? Why did he visit at night?

(vi) Why did the peddler decline the invitation of the ironmaster?

9. Answer **any Two** of the following in about 40-50 words: **(2x2=4)**
- (i) How did the Tiger King become the victim of the hundredth Tiger?
 - (ii) What kind of people did Charley see at the third level?
 - (iii) How do geological phenomena help us to know about the history of humankind?

10. Answer **any one** of the following question in 120-150 words: **(1x5=5)**
- “It is his *karam*, his destiny” that made Mukesh’s grandfather go blind. How did Mukesh disprove this belief by choosing a new vocation and making his own destiny?

OR

Man is a social animal. He can survive but not live in isolation”. Do you agree? Justify your answer with reference to the lesson 'The Rattrap'.

11. Answer **any one** of the following question in 120-150 words: **(1x5=5)**

How would you describe the behaviour of the Maharaja’s minions towards him? Do you find them truly sincere towards him or are they driven by fear when they obey him?

OR

By whom and with what objective was Students on Ice programme started? How far has it achieved its goals?

LOURDER CENTRAL SCHOOL
MID TERMINAL EXAMINATION 2022-23 SAMPLE PAPER

Subject: Physics

Class XII

Max. Marks 70

SECTION A

This section consists of 21 multiple choice questions of one mark each.

- 1 An electric dipole of moment p is placed parallel to the uniform electric field. The amount of work done in rotating the dipole by 90° is
a. $2pE$ b. pE c. zero d. $-pE$
- 2 Three capacitors $2\mu F$, $3\mu F$ and $6\mu F$ are joined in series with each other. The equivalent capacitance is-
a. $12\mu F$ b. $1\mu F$ c. $2\mu F$ d. $11\mu F$
- 3 Two point charges placed in a medium of dielectric constant 5 are at a distance r between them, experience an electrostatic force ' F '. The electrostatic force between them in vacuum at the same distance r will be-
a. $5F$ b. F c. $2F$ d. $F/5$
- 4 Which statement is true for Gauss law-
a. All the charges whether inside or outside the gaussian surface contribute to the electric flux.
b. Electric flux depends upon the geometry of the gaussian surface.
c. Gauss theorem can be applied to non-uniform electric field.
d. The electric field over the gaussian surface remains continuous and uniform at every point.
- 5-A capacitor plates are charged by a battery with ' V ' volts. After charging battery is disconnected and a dielectric slab with dielectric constant ' K ' is inserted between its plates, the potential across the plates of a capacitor will become
a. Zero b. $2V$ c. V/K d. KV
6. Two similar spheres having $+Q$ and $-Q$ charges are kept at a certain distance. F force acts between the two. If at the middle of two spheres, another similar sphere having $+Q$ charge is kept, then it experiences a force in magnitude and direction as
(a) zero having no direction. (b) $8F$ towards $+Q$ charge.
(c) $8F$ towards $-Q$ charge. (d) $4F$ towards $+Q$ charge.
7. Electric field at a point varies as r° for
(a) an electric dipole (b) a point charge
(c) a plane infinite sheet of charge (d) a line charge of infinite length
8. Potential energy of a dipole is minimum when
a) magnetic moment parallel to B b) magnetic moment perpendicular to B
c) magnetic moment antiparallel to B d) none of these
9. The instantaneous values of emf and the current in a series ac circuit are-
 $E = E_0 \sin \omega t$ and $I = I_0 \sin(\omega t + \pi/3)$ respectively, then it is
a. Necessarily a RL circuit b. Necessarily a RC circuit
c. Necessarily a LCR circuit d. Can be RC or LCR circuit
10. An electric charge q is placed at the centre of a cube of side a . The electric flux on one of its faces will be

electric energy. Such a system is called a capacitor. The more charge a capacitor can store, the greater is its capacitance. Usually, a capacitor consists of two capacitors having equal and opposite charge $+Q$ and $-Q$. Hence, there is a potential difference V between them. By the capacitance of a capacitor, we mean the ratio of the charge Q to the potential difference V . By the charge on a capacitor we mean only the charge Q on the positive plate. Total charge of the capacitor is Zero. The capacitance of a capacitor is a constant and depends on geometric factors, such as the shapes, sizes and relative positions of the two conductors, and the nature of the medium between them. The unit of capacitance is Farad (F). But μF and pF are the more convenient units commonly used. Capacitor consists of two long strips or metal foils, separated by two long strips of dielectrics, rolled up into a small cylinder. Common dielectric materials are plastics (such as polyester and polycarbonates) and aluminium oxide. Capacitors are widely used in television, computer, and other electric circuits.

1.. A parallel plate capacitor C has charge Q . The actual charge on its plates are:

- (a) Q, Q (b) $Q/2, Q/2$
 (c) $Q, -Q$ (d) $Q/2, -Q/2$

2. A parallel plate capacitor is charged. If the plate are pulled apart,

- (a) the capacitance increases. (b) the potential difference increases.
 (c) the total charge increases. (d) the charge and the potential difference remains the same.

3. If n capacitors, each of capacitance C , are connected in series, then the equivalent capacitance of the combination will be.

- (a) $n C$ (b) $n^2 C$ (c) C/n (d) C/n^2

4. Three capacitors 2.0, 3.0 and 6.0 microfarad are connected in series to a 10 v source. The charge(in μC) on the 3.0 microfarad capacitor is:

- a) 5 b) 10 c) 15 d) none of these

5. The dimensions of fall of potential per unit distance are given by:

- (a) $[\text{MLT}^{-3} \text{A}^{-1}]$
 (b) $[\text{ML}^2\text{T}^{-2}\text{A}^{-1}]$
 (c) $[\text{ML}^2\text{T}^{-2}\text{A}^{-3}]$
 (d) $[\text{MLT}^{-2}\text{A}^{-2}]$

Moving coil galvanometer operates on Permanent Magnet Moving Coil (PMMC) mechanism and was designed by the scientist Darsonval.

Moving coil galvanometers are of two types

- (i) Suspended coil
 (ii) Pivoted coil type or tangent galvanometer,

Its working is based on the fact that when a current carrying coil is placed in a magnetic field, it experiences a torque. This torque tends to rotate the coil about its axis of suspension in such a way that the magnetic flux passing through the coil is maximum.

(i) A moving coil galvanometer is an instrument which

- (a) is used to measure emf
- (b) is used to measure potential difference
- (c) is used to measure resistance
- (d) is a deflection instrument which gives a deflection when a current flows through its coil

(ii) To make the field radial in a moving coil galvanometer.

- (a) number of turns of coil is kept small
- (b) magnet is taken in the form of horse-shoe
- (c) poles are of very strong magnets
- (d) poles are cylindrically cut

(iii) The deflection in a moving coil galvanometer is

- (a) directly proportional to torsional constant of spring
- (b) directly proportional to the number of turns in the coil
- (c) inversely proportional to the area of the coil
- (d) inversely proportional to the current in the coil

(iv) In a moving coil galvanometer, having a coil of N-turns of area A and carrying current I is placed in a radial field of strength B.

The torque acting on the coil is

- (a) NA^2B^2I
- (b) $NABI^2$
- (c) N^2ABI
- (d) $NABI$

(v) To increase the current sensitivity of a moving coil galvanometer, we should decrease

- (a) strength of magnet
- (b) torsional constant of spring
- (c) number of turns in coil
- (d) area of coil

SECTION C

This section consists of 4 objective questions of 1 mark each.

Match the following:

Column I	Column II
(i) Resonant frequency	(a) $V I \cos \phi$
(ii) Quality factor	(b) $1/2LI^2$ (b) $1/2LI^2$
(iii) Average power	(c) $1/(\sqrt{LC})$
(iv) Impedance	(d) $\sqrt{(R^2 + (X_L - X_C)^2)}$
(v) Magnetic potential	(e) $E(dI dt)$

energy(v)Magnetic potential energy	
(vi)Coefficient of self induction(vi)Coefficient of self induction	(f) ω_0LR (f) ω_0LR

A)a→iii,b→v,c→i,d→iv,e→vi,f→iiB)a→ii,b→iv,c→v,d→iii,e→vi,f→iC)a→ii,b→iii,c→i,d→iv,e→v,f→viD)None of these

A)a→iii,b→v,c→i,d→iv,e→vi,f→iiB)a→ii,b→iv,c→v,d→iii,e→vi,f→iC)a→ii,b→iii,c→i,d→iv,e→v,f→viD)None of these

1. If the radius of the Gaussian surface enclosing a charge is halved, how does the electric flux through the Gaussian surface change ?
2. A hollow metal sphere of radius 5 cm is charged such that the potential on its surface is 10 V. What is the potential at the centre of the sphere?
3. Two wires of equal length, one of copper and the other of manganin have the same resistance. Which wire is thicker?
4. How does the mutual inductance of a pair of coils change when
 - (i) distance between the coils is increased and
 - (ii) number of turns in the coils is increased
5. Write the expression for the work done on an electric dipole of dipole moment p in turning it from its position of stable equilibrium to a position of unstable equilibrium in a uniform electric field E .
6. Derive the expression for the electric potential at any point along the axial line of an electric dipole
7. Why is a potentiometer preferred over a voltmeter for determining the emf of a cell?
8. Derive an expression for the self-inductance of a long air-cored solenoid of length l and number of turns N .
9. Prove that an ideal inductor does not dissipate power in an a.c. circuit.
10. A steady current (I_1) flows through a long straight wire. Another wire carrying steady current (I_2) in the same direction is kept close and parallel to the first wire. Show with the help of a diagram how the magnetic field due to the current I_1 exerts a magnetic force on the second wire. Write the expression for this force.
11. What is a galvanometer? How can it be converted into an ammeter? An ammeter of resistance 1Ω can measure current upto 1.0 A
 - (i) What must be the value of the shunt resistance to enable the ammeter to measure upto 5.0 (A) ?
 - (ii) What is the combined resistance of the ammeter and the shunt?

Lourdes Central School

Model paper

Class: XII-2022-23

Subject: Chemistry

Date: 24 /09/2022

General Instructions:

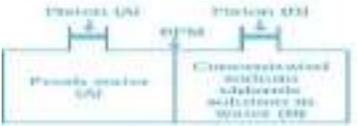
Time Allowed: 3 hrs.

Maximum Marks: 70

Read the following instructions very carefully and strictly follow them:

- (i) This question paper comprises four Sections – A, B, C and D. There are 46 questions in the question paper. All questions are compulsory.
- (ii) Section A – Questions no. 1 to 35 are very short answer type questions, carrying 1 mark each. Answer these questions in one word or one sentence.
- (iii) Section B – Questions no. 36 to 39 are short answer type questions, carrying 2 marks each.
- (iv) Section C – Questions no. 40 to 43 are long answer type-I questions, carrying 3 marks each.
- (v) Section D – Questions no. 44 to 46 are long answer type-II questions, carrying 5 marks each.
- (vi) There is no overall choice in the question paper. However, an internal choice has been provided, You have to attempt only one of the choices in such questions.
- (vii) In addition to this, separate instructions are given with each section and question, wherever necessary.
- (viii) Use of calculators and log tables is not permitted.**

SNO	QUESTIONS	
1.	Which of the following undergoes nucleophilic substitution exclusively by S_N1 mechanism? (a) Benzyl chloride (b) Ethyl chloride (c) Chlorobenzene (d) Isopropyl chloride	1
2.	$\text{Phenol} \xrightarrow{\text{Zn, dust}} \text{'X'} \xrightarrow[\text{Anhy. AlCl}_3]{\text{CH}_3\text{Cl}} \text{'Y'} \xrightarrow[\text{KMnO}_4]{\text{Alkaline}} \text{'Z'}$ The product 'Z' is (a) Benzaldehyde (b) Benzoic acid (c) Benzene (d) Toluene	1
3.	Oxidation number of gold metal is (a) +1 (b) 0 (c) -1 (d) all of these	1
4.	$\text{K}_2[\text{Fe}(\text{CN})_6]$ is a/an (a) double salt (b) complex salt (c) acid (d) base	1
5.	Henry's law constant for molality of methane in benzene at 298 K is 4.27×10^5 mm Hg. The mole fraction of methane in benzene at 298 K under 760 mm Hg is (a) 1.78×10^{-3} (b) 17.43 (c) 0.114 (d) 2.814	1
6.	The unit of ebullioscopic constant is _____. (i) K kg mol^{-1} or K (molality)^{-1} (ii) mol kg K^{-1} or $\text{K}^{-1}(\text{molality})$ (iii) $\text{kg mol}^{-1} \text{K}^{-1}$ or $\text{K}^{-1}(\text{molality})^{-1}$ (iv) K mol kg^{-1} or K (molality)	1
7.	Although +3 is the characteristic oxidation state for lanthanides but cerium also shows +4 oxidation state because _____. (i) it has variable ionisation enthalpy	1

	(ii) it has a tendency to attain noble gas configuration (iii) it has a tendency to attain f^0 configuration (iv) it resembles Pb^{4+}													
8	Which reagent will you use for the following reaction ? $CH_3CH_2CH_2CH_3 \longrightarrow CH_3CH_2CH_2CH_2Cl + CH_3CH_2CHClCH_3$ (i) Cl_2/UV light (ii) $NaCl + H_2SO_4$ (iii) Cl_2 gas in dark (iv) Cl_2 gas in the presence of iron in dark	1												
9.	IUPAC name of m-cresol is _____. (i) 3-methylphenol (ii) 3-chlorophenol (iii) 3-methoxyphenol (iv) benzene-1,3-diol	1												
10.	Identify the correct statements for the behaviour of ethane-1, 2-diamine as a ligand. (i) It is a neutral ligand. (ii) It is a didentate ligand. (iii) It is a chelating ligand. (iv) It is a unidentate ligand.	1												
11	Consider the Fig. and mark the correct option.  (i) water will move from side (A) to side (B) if a pressure lower than osmotic pressure is applied on piston (B). (ii) water will move from side (B) to side (A) if a pressure greater than osmotic pressure is applied on piston (B). (iii) water will move from side (B) to side (A) if a pressure equal to osmotic pressure is applied on piston (B). (iv) water will move from side (A) to side (B) if pressure equal to osmotic pressure is applied on piston (A).	1												
12	Match the laws given in Column I with expressions given in Column II. <table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Column I</th> <th style="text-align: center;">Column II</th> </tr> </thead> <tbody> <tr> <td>(i) Raoult's law</td> <td>(a) $\Delta T_f = K_f m$</td> </tr> <tr> <td>(ii) Henry's law</td> <td>(b) $\Pi = CRT$</td> </tr> <tr> <td>(iii) Elevation of boiling point</td> <td>(c) $p = x_1 p_1^0 + x_2 p_2^0$</td> </tr> <tr> <td>(iv) Depression in freezing point</td> <td>(d) $\Delta T_b = K_b m$</td> </tr> <tr> <td>(v) Osmotic pressure</td> <td>(e) $p = K_{\Pi} \cdot x$</td> </tr> </tbody> </table>	Column I	Column II	(i) Raoult's law	(a) $\Delta T_f = K_f m$	(ii) Henry's law	(b) $\Pi = CRT$	(iii) Elevation of boiling point	(c) $p = x_1 p_1^0 + x_2 p_2^0$	(iv) Depression in freezing point	(d) $\Delta T_b = K_b m$	(v) Osmotic pressure	(e) $p = K_{\Pi} \cdot x$	1
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13	Arrange the following compounds in increasing order of boiling point. Propan-1-ol, butan-1-ol, butan-2-ol, pentan-1-ol	1												
14	Why is the solubility of haloalkanes in water very low?	1												

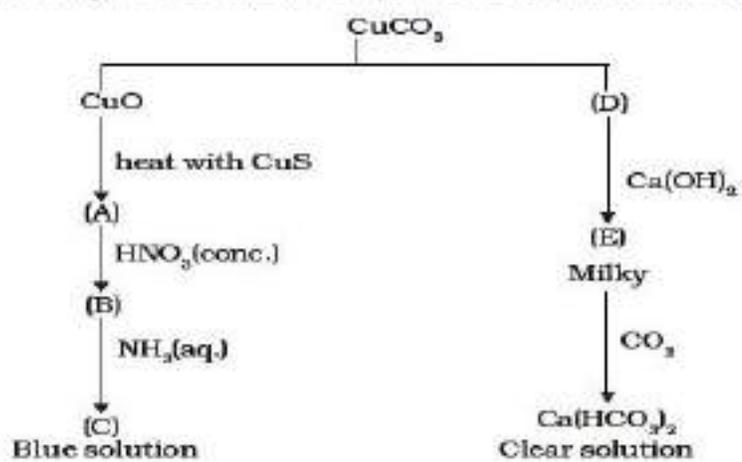
15	Explain why on addition of 1 mol of NaCl to 1 litre of water, the boiling point of water increases, while addition of 1 mol of methyl alcohol to one litre of water decreases its boiling point.	1
16	<p><i>In the following questions a statement of assertion followed by a statement of reason is given. Choose the correct answer out of the following choices.</i></p> <p>(i) Assertion and reason both are correct statements and reason is correct explanation for assertion.</p> <p>(ii) Assertion and reason both are correct statements but reason is not correct explanation for assertion.</p> <p>(iii) Assertion is correct statement but reason is wrong statement. (iv) Assertion and reason both are incorrect statements.</p> <p>(v) Assertion is wrong statement but reason is correct statement.</p> <p>16.assertion : When methyl alcohol is added to water, boiling point of water increases. Reason : When a volatile solute is added to a volatile solvent elevation in boiling point is observed.</p> <p>17.Assertion : $[\text{Cr}(\text{H}_2\text{O})_6]\text{Cl}_2$ and $[\text{Fe}(\text{H}_2\text{O})_6]\text{Cl}_2$ are reducing in nature. Reason: Unpaired electrons are present in their d-orbitals.</p> <p>18.Assertion : KCN reacts with methyl chloride to give methyl isocyanide Reason : CN^- is an ambident nucleophile.</p> <p>19. Assertion : Separation of Zr and Hf is difficult. Reason : Because Zr and Hf lie in the same group of the periodic table.</p> <p>20. Assertion : p-nitrophenol is more acidic than phenol. Reason : Nitro group helps in the stabilisation of the phenoxide ion by dispersal of negative charge due to resonance.</p>	5
	<p>Biocatalysts are complex organic compounds which act as catalysts in reaction taking place in living organism. These biocatalysts (enzymes) are used in the manufacture of ethanol.</p> <p>Ethanol from sugar solution (molasses): Molasses is a non-crystalline form of sugar obtained as the mother liquor after crystallisation of sugar from sugar solution. This contains about 50% sugar. It is diluted to about 10% solution and yeast is added and kept for about 2-3 days. Yeast supplies the enzymes invertase and zymase. The enzyme invertase hydrolyses sucrose to glucose and fructose. The enzyme zymase (found in yeast) converts glucose and fructose to ethanol.</p> <p>21. Which of the following reagents can be used to oxidize primary alcohols to aldehydes? (a) CrO_3 in anhydrous medium (b) KMnO_4 in acidic medium (c) Pyridinium chlorochromate (d) Heat in the presence of Cu at 573 K</p> <p>22. Which of the following is most acidic? (a) Benzyl alcohol (b) Cyclohexanol (c) Phenol (d) m-Chlorophenol</p>	5

38	<p>(a) (i) On the basis of crystal field theory, write the electronic configuration for d^4 ion if $\Delta_o < P$.</p> <p>(ii) Using valence bond theory, predict the hybridization and magnetic character of $[\text{Ni}(\text{CN})_4]^{2-}$. (Atomic number of Ni = 28)</p> <p>(iii) Write the formula of the following complex using IUPAC norms : Dichloridobis (ethane-1,2-diamine) cobalt (III) 1 × 3 = 3</p> <p style="text-align: center;">OR</p> <p>(b) When a co-ordination compound $\text{NiCl}_2 \cdot 6\text{H}_2\text{O}$ mixed with AgNO_3, 2 moles of AgCl are precipitated per mole of the compound. Write</p> <p>(i) Structural formula of the complex.</p> <p>(ii) Secondary valency of 'Ni' in the complex.</p> <p>(iii) IUPAC name of the complex. 1 × 3 = 3</p>	3
39	<p>Following ions of 3d-transition series are given :</p> <p style="text-align: center;">Ti^{4+}, V^{3+}, Cr^{3+}, Mn^{3+}</p> <p style="text-align: center;">(Atomic number : Ti = 22, V = 23, Cr = 24, Mn = 25)</p> <p>Identify the ion which is</p> <p>(i) most stable in aqueous solution.</p> <p>(ii) a strong oxidising agent.</p> <p>(iii) colourless in aqueous solution.</p> <p>Give suitable reason in each.</p>	3
40	<p>Boiling point of water at 750 mm Hg is 99.63°C. How much sucrose is to be added to 500 g of water such that it boils at 100°C.</p>	3
41	<p>How can you remove the hard calcium carbonate layer of the egg without damaging its semipermeable membrane? Can this egg be inserted into a bottle with a narrow neck without distorting its shape? Explain the process involved.</p>	5
42	<p>Compound 'A' with molecular formula $\text{C}_4\text{H}_9\text{Br}$ is treated with aq. KOH solution. The rate of this reaction depends upon the concentration of the compound 'A' only. When another optically active isomer 'B' of this compound was treated with aq. KOH solution, the rate of reaction was found to be dependent on concentration of compound and KOH both.</p> <p>(i) Write down the structural formula of both compounds 'A' and 'B'.</p> <p>(ii) Out of these two compounds, which one will be converted to the product with inverted configuration.</p>	5

43

Identify A to E and also explain the reactions involved.

5



LOURDES CENTRAL SCHOOL
Midterm Examination Sample Paper
Class XII
Mathematics (Code- 041)

Time allowed : 3 hours

Maximum Marks : 80

Date :

General Instructions:

1. All questions are compulsory.
2. This question paper contains **five sections – A,B, C,D and E**. Each part is compulsory.
3. Section A comprises of 19 MCQ questions of one mark each (from Q01 - 19) and one Case-study based question with five sub-parts of one mark each Q20.
4. Section B comprises of 16 questions of one mark each (from Q21 – Q36)
5. Section C comprises of 06 questions of two marks each (from Q37 – Q42).
6. Section D comprises of 04 questions of three marks each (from Q43 -Q46).
7. Section E comprises of 04 questions of four marks each (from Q47 -Q50).
8. There is an **internal choice** in some of the questions.

SECTION A

1. If A relation R on the set {1,2,3} be defined by $R = \{ (1,2) \}$ then R is
a) Reflexive b) transitive c) symmetric d) none of these
2. Let us define a relation R in R as aRb if $a \geq b$. Then R is
a) An equivalence relation
b) reflexive and transitive but not symmetric
c) symmetric and transitive but not reflexive
d) neither transitive nor reflexive but symmetric
3. Let $A = \{1,2,3\}$ and the relation $R = \{(1,1), (2,2), (3,3), (1,2), (2,3), (1,3)\}$. Then R is
a) reflexive and but not symmetric
b) reflexive but not transitive
c) symmetric and transitive
d) neither symmetric nor transitive
4. If A and B are two matrices of the order $3 \times m$ and $3 \times n$ respectively and $m=n$ then the order of the matrix $(5A-2B)$ is
a) $m \times 3$ b) 3×3 c) $m \times n$ d) $3 \times n$
5. If $A = \begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$ then A^2 is equal to
a) $\begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$ b) $\begin{bmatrix} 1 & 0 \\ 1 & 0 \end{bmatrix}$ c) $\begin{bmatrix} 0 & 1 \\ 0 & 1 \end{bmatrix}$ d) $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$
6. If matrix $A = [a_{ij}]_{2 \times 2}$ where $a_{ij} = 1$ if $i \neq j$ and 0 if $i=j$ then A^2 is equal to
a) 1 b) A c) 0 d) none of these
7. If $A = \begin{bmatrix} 2 & \lambda - 3 \\ 0 & 2 & 5 \\ 1 & 1 & 3 \end{bmatrix}$. Then A^{-1} exists if
a) $\lambda = 2$ b) $\lambda \neq 2$ c) $\lambda \neq -2$ d) none of these
8. $A = [a_{ij}] = \begin{bmatrix} 2 & 3 & -5 \\ 1 & 4 & 9 \\ 0 & 7 & -2 \end{bmatrix}$ and $B = [b_{ij}] = \begin{bmatrix} 2 & -1 \\ -3 & 4 \\ 1 & 2 \end{bmatrix}$ then the value of $a_{11}b_{11} + a_{22}b_{22}$ is
a) 10 b) 15 c) 20 d) 25
9. The function $f(x) = \cot x$ is discontinuous on the set

- a) $\{x: x=n\pi, n \in \mathbb{Z}\}$ b) $\{x: x=2n\pi, n \in \mathbb{Z}\}$ c) $\{x: x=(2n+1)\frac{\pi}{2}, n \in \mathbb{Z}\}$
 d) $\{x: x=\frac{n\pi}{2}, n \in \mathbb{Z}\}$

10. If $f(x) = \begin{cases} mx + 1, & \text{if } x \leq \frac{\pi}{2} \\ \sin x + n, & \text{if } x > \frac{\pi}{2} \end{cases}$ is continuous at $x = \frac{\pi}{2}$ then

- a) $m=1, n=0$ b) $m=\frac{n\pi}{2}+1$ c) $n=\frac{m\pi}{2}$ d) $m=n=\frac{\pi}{2}$

11. If $x = t^2$ and $y = t^3$ then $\frac{d^2y}{dx^2}$ is

- a) $3/2$ b) $3/4t$ c) $3/2t$ d) $3/t$

12. If $f(x) = \begin{cases} \frac{\sin 3x}{x}, & x \neq 0 \\ k, & x = 0 \end{cases}$ is continuous at $x=0$ then the value of k is

- a) $2/3$ b) $3/2$ c) 6 d) $1/6$

13. The derivative of $\sin^2(x^2)$ with respect to x^2 is

- a) $2\sin(x^2) \cos(x^2)$ b) $\sin(2x^2) \cos(2x^2)$ c) $2\sin(x) \cos(x)$ d) none of these

14. $\int_0^{\pi/4} \sin 2x \, dx$ is equal to a) $-1/2$ b) $1/2$ c) $1/4$ d) $-1/4$

15. $\int_0^1 \frac{dx}{\sqrt{1-x^2}}$ is equal to a) $-\frac{\pi}{2}$ b) $\frac{\pi}{4}$ c) $\frac{\pi}{2}$ d) $-\frac{\pi}{4}$

16. $\int \frac{\cos\sqrt{x}}{\sqrt{x}} \, dx$ is equal to a) $\sin\sqrt{x} + c$ b) $2\sin\sqrt{x} + c$ c) $\cos\sqrt{x} + c$ d) $\frac{1}{2}\sin\sqrt{x} + c$

17. $\int \frac{\cos 2x - \cos 2\theta}{\cos x - \cos \theta} \, dx$ is equal to a) $2(\sin x + x \cos \theta) + c$ b) $2(\sin x - x \cos \theta) + c$
 c) $2(\sin x + 2x \cos \theta) + c$ d) $2(\sin x - 2x \cos \theta) + c$

18. $\int e^x \left(\frac{1-x}{1+x^2}\right)^2 \, dx$ is equal to a) $\frac{e^x}{1+x^2} + c$ b) $\frac{-e^x}{1+x^2} + c$ c) $\frac{e^x}{(1+x^2)^2} + c$ d) $\frac{-e^x}{(1+x^2)^2} + c$

19. The area of the curve bounded by the curve $y = \sin x$ between the ordinates $x=0, x=\frac{\pi}{2}$ and the x axis is a) 2 sq units b) 4 sq units c) 3 sq units d) 1 sq unit

20. A window is in the form of a rectangle surmounted by a semicircular opening. The total perimeter of the window is 10 m. Let x and y be the length and the breadth of the rectangle.

i) The perimeter of the rectangle is given by

- a) $2x + 2y + \frac{\pi x}{2} = 10$ b) $x + 2y + \frac{\pi x}{2} = 10$ c) $x + 2y + \pi x = 10$ d) $2x + 2y + \pi x = 10$

ii) The area of the window A is given by

- a) $\frac{20x + (2+\pi)x^2}{4} + \frac{\pi x^2}{8}$ b) $\frac{20x - (2-\pi)x^2}{4} + \frac{\pi x^2}{8}$
 c) $\frac{20x - (2+\pi)x^2}{4} + \frac{\pi x^2}{8}$ d) $\frac{20x - (2+\pi)x^2}{2} + \frac{\pi x^2}{8}$

iii) $\frac{dA}{dx} =$ a) $\frac{20 - (2+\pi)2x}{4} + \frac{2\pi x}{8}$ b) $\frac{20 + (2+\pi)2x}{4} + \frac{2\pi x}{8}$ c) $\frac{20 - (2-\pi)2x}{4} + \frac{2\pi x}{8}$
 d) $\frac{20 - (2+\pi)2x}{2} + \frac{2\pi x}{8}$

iv) $\frac{d^2A}{dx^2} =$ a) $\frac{(2+\pi)2}{4} + \frac{2\pi}{8}$ b) $\frac{-(2-\pi)2}{4} + \frac{2\pi}{8}$ c) $\frac{-(2+\pi)2}{2} + \frac{2\pi}{8}$ d) $\frac{-(2+\pi)2}{4} + \frac{2\pi}{8}$

v) Maximum light enters the room when length and breadth are

- a) $x = \frac{20}{4+\pi}, y = \frac{10}{4+\pi}$ b) $x = \frac{20}{4-\pi}, y = \frac{10}{4-\pi}$ c) $x = \frac{10}{4+\pi}, y = \frac{5}{4+\pi}$
 d) $x = \frac{30}{4+\pi}, y = \frac{20}{4+\pi}$

SECTION B

21. The Principal Value of $\operatorname{cosec}^{-1} -\sqrt{2}$ is _____.
22. The domain of the function $\cos^{-1}(2x-1)$ is _____
23. If $\begin{vmatrix} 2x & 5 \\ 8 & x \end{vmatrix} = \begin{vmatrix} 6 & -2 \\ 7 & 3 \end{vmatrix}$ then the value of x is _____
24. The area of a triangle with vertices $(-3,0)$, $(3,0)$ and $(0,k)$ is 9 sq units. Then the value of k is _____
25. Is the following function $f(x) = \begin{cases} x, & \text{if } x \leq 1 \\ 5, & \text{if } x > 1 \end{cases}$ continuous at $x=0$?
26. Differentiate $e^{\sqrt{3x}}$ with respect to x .
27. If the function $f(x) = \begin{cases} \frac{x^2-9}{x-3}, & \text{if } x \neq 3 \\ k, & \text{if } x = 3 \end{cases}$ continuous at $x=3$ then find k .
28. Find the interval in which $y = 4x-9$ is increasing for all $x \in \mathbb{R}$.
29. Find the rate of change of the area of a circle with respect to its radius r when $r = 5$ cms .
30. The edge of a variable cube is increasing at the rate of 3 cm/s How fast is the volume of the cube increasing when the edge is 10 cm long ?
31. Find the area bounded by $x=1$, $x=2$, $xy=1$ and x axis.
32. Find $\int \frac{3x}{3x-1} dx$
33. Find $\int \frac{\sin^2 x - \cos^2 x}{\sin x \cos x} dx$
34. Find $\int \frac{1}{x(1+\log x)} dx$
35. Find $\int_1^3 \frac{1}{9+x^2} dx$
36. Find $\int_0^1 e^{x^2} x dx$

SECTION B

37. Show that the function f in $A = \mathbb{R} - \left\{ \frac{2}{3} \right\}$ defined by $f(x) = \frac{4x+3}{6x-4}$ is onto.
38. If $A = \begin{bmatrix} 3 & 1 \\ -1 & 2 \end{bmatrix}$ find k so that $A^2 = 5A + kI$

OR

If A and B are square matrices of order 3 such that $|A| = -1$, $|B| = 3$ then find the value of $|2AB|$.

39. Find $\frac{dy}{dx}$ if $x^2 + 4xy + y^2 = 5$

OR

Find the derivative of $\sin^2 x$ with respect to $e^{\cos x}$

40. Show that the function f given by $f(x) = \tan^{-1}(\sin x + \cos x)$ is decreasing for all $x \in \left(\frac{\pi}{4}, \frac{\pi}{2} \right)$

41. Find $\int \sqrt{x^2 - 2x} dx$

42. Find the area of the region bounded by the line $x=2$ and the parabola $y^2=8x$

SECTION C

43. Check if the relation R on the set $A=\{1,2,3,4,5,6\}$ defined as $R= \{(x,y): y = x+1\}$ is reflexive , symmetric or transitive.

OR

Let $A= \{x \in \mathbb{Z} : 0 \leq x \leq 12\}$. Show that $R= \{(x,y): x, y \in A, |x-y| \text{ is divisible by } 4\}$ is an equivalence relation. Find the set of all elements related to 1. Also write the equivalence class [2].

44. A trust fund has Rs 35,000 to be invested in two types of bonds. The first bond pays 8% interest per annum and the second bond pays 10% interest per annum. Use matrix multiplication to determine how to divide the amount among the two types of bonds if the trust fund obtains an annual total interest of Rs 3200.
45. If $\log(x^2 + y^2) = 2 \tan^{-1} \frac{y}{x}$ show that $\frac{dy}{dx} = \frac{x+y}{x-y}$

46. Evaluate $\int_0^{\frac{\pi}{2}} \frac{x}{\sin x + \cos x} dx$

OR

Evaluate $\int \frac{2 \cos x}{(1 - \sin x)(1 + \sin^2 x)} dx$

SECTION D

47. Write in the simplest form $\tan^{-1} \frac{\sqrt{1+x^2}-1}{x}$, $x \neq 0$

49. If $A = \begin{bmatrix} 1 & 3 & 4 \\ 2 & 1 & 2 \\ 5 & 1 & 1 \end{bmatrix}$ find A^{-1} . Hence solve the system of equations $x + 3y + 4z = 8$,
 $2x + y + 2z = 5$, $5x + y + z = 7$

50. Show that height of the cylinder of greatest volume which can be inscribed in a right circular cone of height h and semi vertical angle α is one third that of the cone. Hence find the greatest volume of the cylinder.

OR

Show that the altitude of the right circular cone of maximum volume that can be inscribed in a cone of radius r is $\frac{4r}{3}$. Also show that the maximum volume of the cone is $\frac{8}{27}$ of the volume of the sphere.

50. Find the area of the region bounded by the ellipse $\frac{x^2}{4} + \frac{y^2}{9} = 1$

OR

Find the area of the smaller part of the circle $x^2 + y^2 = a^2$ cut off by the line $x = a/\sqrt{2}$

Sample Question Paper
Class: XII Session: 2021-22
Computer Science (Code 083)
(Theory: Term-1)

Maximum Marks: 35

Time Allowed: 90 Minutes

General Instructions:

- The question paper is divided into 3 Sections - A, B and C.
- Section A, consist of 25 Questions (1-25). Attempt any 20 questions.
- Section B, consist of 24 Questions (26-49). Attempt any 20 questions.
- Section C, consist of 6 case study based Questions (50-55). Attempt any 5 questions.
- All questions carry equal marks.

Q.N.	Section-A
	This section consists of 25 Questions (1 to 25). Attempt any 20 questions from this section. Choose the best possible option.
1	Find the invalid identifier from the following a. none b. address c. Name d. pass
2	Consider a declaration L = (1, 'Python', '3.14'). Which of the following represents the data type of L? a. list b. tuple c. dictionary d. string
3	Given a Tuple tup1= (10, 20, 30, 40, 50, 60, 70, 80, 90). What will be the output of print (tup1 [3:7:2])? a. (40,50,60,70,80) b. (40,50,60,70) c. [40,60] d. (40,60)
4	Which of the following option is not correct? a. if we try to read a text file that does not exist, an error occurs. b. if we try to read a text file that does not exist, the file gets created. c. if we try to write on a text file that does not exist, no error occurs. d. if we try to write on a text file that does not exist, the file gets Created.
5	Which of the following options can be used to read the first line of a text file Myfile.txt? a. myfile = open('Myfile.txt'); myfile.read() b. myfile = open('Myfile.txt','r'); myfile.read(n) c. myfile = open('Myfile.txt'); myfile.readline() d. myfile = open('Myfile.txt'); myfile.readlines()

6	<p>Assume that the position of the file pointer is at the beginning of 3rd line in a text file. Which of the following option can be used to read all the remaining lines?</p> <ul style="list-style-type: none"> a. myfile.read() b. myfile.read(n) c. myfile.readline() d. myfile.readlines()
7	<p>A text file student.txt is stored in the storage device. Identify the correct option out of the following options to open the file in read mode.</p> <ul style="list-style-type: none"> i. myfile = open('student.txt','rb') ii. myfile = open('student.txt','w') iii. myfile = open('student.txt','r') iv. myfile = open('student.txt') <ul style="list-style-type: none"> a. only i b. both i and iv c. both iii and iv d. both i and iii
8	<p>The return type of the input() function is</p> <ul style="list-style-type: none"> a. string b. integer c. list d. tuple
9	<p>Which of the following operator cannot be used with string data type?</p> <ul style="list-style-type: none"> a. + b. in c. * d. /
10	<p>Consider a tuple tup1 = (10, 15, 25, and 30). Identify the statement that will result in an error.</p> <ul style="list-style-type: none"> a. print(tup1[2]) b. tup1[2] = 20 c. print(min(tup1)) d. print(len(tup1))
11	<p>Which of the following statement is incorrect in the context of binary files?</p> <ul style="list-style-type: none"> a. Information is stored in the same format in which the information is held in memory. b. No character translation takes place c. Every line ends with a new line character d. pickle module is used for reading and writing
12	<p>What is the significance of the tell() method?</p> <ul style="list-style-type: none"> a. tells the path of file b. tells the current position of the file pointer within the file c. tells the end position within the file d. checks the existence of a file at the desired location

13	<p>Which of the following statement is true?</p> <ul style="list-style-type: none"> a. pickling creates an object from a sequence of bytes b. pickling is used for object serialization c. pickling is used for object deserialization d. pickling is used to manage all types of files in Python
14	<p>Syntax of seek function in Python is <code>myfile.seek(offset, reference_point)</code> where <code>myfile</code> is the file object. What is the default value of <code>reference_point</code>?</p> <ul style="list-style-type: none"> a. 0 b. 1 c. 2 d. 3
15	<p>Which of the following components are part of a function header in Python?</p> <ul style="list-style-type: none"> a. Function Name b. Return Statement c. Parameter List d. Both a and c
16	<p>Which of the following function header is correct?</p> <ul style="list-style-type: none"> a. <code>def cal_si(p=100, r, t=2)</code> b. <code>def cal_si(p=100, r=8, t)</code> c. <code>def cal_si(p, r=8, t)</code> d. <code>def cal_si(p, r=8, t=2)</code>
17	<p>Which of the following is the correct way to call a function?</p> <ul style="list-style-type: none"> a. <code>my_func()</code> b. <code>def my_func()</code> c. <code>return my_func</code> d. <code>call my_func()</code>
18	<p>Which of the following character acts as default delimiter in a csv file?</p> <ul style="list-style-type: none"> a. (colon) : b. (hyphen) - c. (comma) , d. (vertical line)
19	<p>Syntax for opening Student.csv file in write mode is <code>myfile = open("Student.csv","w",newline=")</code>.</p> <p>What is the importance of <code>newline=""</code>?</p> <ul style="list-style-type: none"> a. A newline gets added to the file b. Empty string gets appended to the first line. c. Empty string gets appended to all lines. d. EOL translation is suppressed
20	<p>What is the correct expansion of CSV files?</p> <ul style="list-style-type: none"> a. Comma Separable Values b. Comma Separated Values c. Comma Split Values d. Comma Separation Values

21	<p>Which of the following is not a function / method of csv module in Python?</p> <ul style="list-style-type: none"> a. read() b. reader() c. writer() d. writerow()
22	<p>Which one of the following is the default extension of a Python file?</p> <ul style="list-style-type: none"> a. .exe b. .p++ c. .py d. .p
23	<p>Which of the following symbol is used in Python for single line comment?</p> <ul style="list-style-type: none"> a. / b. /* c. // d. #
24	<p>Which of the following statement opens a binary file record.bin in write mode and writes data from a list lst1 = [1,2,3,4] on the binary file?</p> <ul style="list-style-type: none"> a. with open('record.bin','wb') as myfile: pickle.dump(lst1,myfile) b. with open('record.bin','wb') as myfile: pickle.dump(myfile,lst1) c. with open('record.bin','wb+') as myfile: pickle.dump(myfile,lst1) d. with open('record.bin','ab') as myfile: pickle.dump(myfile,lst1)
25	<p>Which of these about a dictionary is false?</p> <ul style="list-style-type: none"> a) The values of a dictionary can be accessed using keys b) The keys of a dictionary can be accessed using values c) Dictionaries aren't ordered d) Dictionaries are mutable
Section-B	
This section consists of 24 Questions (26 to 49). Attempt any 20 questions.	
26	<p>What is the output of following code:</p> <pre style="margin-left: 40px;">T=(100) print(T*2)</pre> <ul style="list-style-type: none"> a. Syntax error b. (200,) c. 200 d. (100,100)

27	<p>Suppose content of 'Myfile.txt' is:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"><p>Twinkle twinkle little star How I wonder what you are Up above the world so high Like a diamond in the sky</p></div> <p>What will be the output of the following code?</p> <pre>myfile = open("Myfile.txt") data = myfile.readlines() print(len(data)) myfile.close()</pre> <p>a. 3 b. 4 c. 5 d. 6</p>
28	<p>Identify the output of the following Python statements.</p> <pre>x = [[10.0, 11.0, 12.0],[13.0, 14.0, 15.0]] y = x[1][2] print(y)</pre> <p>a. 12.0 b. 13.0 c. 14.0 d. 15.0</p>
29	<p>Identify the output of the following Python statements.</p> <pre>x = 2 while x < 9: print(x, end='') x = x + 1</pre> <p>a. 12345678 b. 123456789 c. 2345678 d. 23456789</p>
30	<p>Identify the output of the following Python statements.</p> <pre>b = 1 for a in range(1, 10, 2): b += a + 2 print(b)</pre> <p>a. 31 b. 33 c. 36 d. 39</p>

31	<p>Identify the output of the following Python statements.</p> <pre>lst1 = [10, 15, 20, 25, 30] lst1.insert(3, 4) lst1.insert(2, 3) print (lst1[-5])</pre> <p>a. 2 b. 3 c. 4 d. 20</p>																		
32	<p>Raghav is trying to write a tuple tup1 = (1,2,3,4,5) on a binary file test.bin. Consider the following code written by him.</p> <pre>import pickle tup1 = (1,2,3,4,5) myfile = open("test.bin", 'wb') pickle._____ #Statement 1 myfile.close()</pre> <p>Identify the missing code in Statement 1.</p> <p>a. dump(myfile,tup1) b. dump(tup1, myfile) c. write(tup1,myfile) d. load(myfile,tup1)</p>																		
33	<p>A binary file employee.dat has following data</p> <table border="1" data-bbox="625 1018 1096 1281"> <thead> <tr> <th>Empno</th> <th>empname</th> <th>Salary</th> </tr> </thead> <tbody> <tr> <td>101</td> <td>Anuj</td> <td>50000</td> </tr> <tr> <td>102</td> <td>Arijita</td> <td>40000</td> </tr> <tr> <td>103</td> <td>Hanika</td> <td>30000</td> </tr> <tr> <td>104</td> <td>Firoz</td> <td>60000</td> </tr> <tr> <td>105</td> <td>Vijaylakshmi</td> <td>40000</td> </tr> </tbody> </table> <pre>def display(eno): f=open("employee.dat", "rb") totSum=0 try: while True: R=pickle.load(f) if R[0]==eno: _____ #Line1 totSum=totSum+R[2] except: f.close() print(totSum)</pre> <p>When the above mentioned function, display (103) is executed, the output displayed is 190000.</p> <p>Write appropriate jump statement from the following to obtain the above output.</p>	Empno	empname	Salary	101	Anuj	50000	102	Arijita	40000	103	Hanika	30000	104	Firoz	60000	105	Vijaylakshmi	40000
Empno	empname	Salary																	
101	Anuj	50000																	
102	Arijita	40000																	
103	Hanika	30000																	
104	Firoz	60000																	
105	Vijaylakshmi	40000																	

	<ul style="list-style-type: none"> a. jump b. break c. continue d. return
34	<p>What will be the output of the following Python code?</p> <pre>def add (num1, num2): sum = num1 + num2 sum = add(20,30) print(sum)</pre> <ul style="list-style-type: none"> a. 50 b. 0 c. Null d. None
35	<p>Evaluate the following expression and identify the correct answer.</p> $16 - (4 + 2) * 5 + 2 ** 3 * 4$ <ul style="list-style-type: none"> a. 54 b. 46 c. 18 d. 32
36	<p>What will be the output of the following code?</p> <pre>def my_func(var1=100, var2=200): var1+=10 var2 = var2 - 10 return var1+var2 print(my_func(50),my_func())</pre> <ul style="list-style-type: none"> a. 100 200 b. 150 300 c. 250 75 d. 250 300
37	<p>What will be the output of the following code?</p> <pre>value = 50 def display(N): global value value = 25 if N%7==0: value = value + N else: value = value - N print(value, end="#") display(20) print(value)</pre> <ul style="list-style-type: none"> a. 50#50 b. 50#5 c. 50#30 d. 5#50#

38	<p>What will be the output of the following code?</p> <pre>import random List=["Delhi","Mumbai","Chennai","Kolkata"] for y in range(4): x = random.randint(1,3) print(List[x],end="#")</pre> <p>a. Delhi#Mumbai#Chennai#Kolkata# b. Mumbai#Chennai#Kolkata#Mumbai# c. Mumbai# Mumbai #Mumbai # Delhi# d. Mumbai# Mumbai #Chennai # Mumbai</p>
39	<p>What is the output of the following code snippet?</p> <pre>def ChangeVal(M,N): for i in range(N): if M[i]%5 == 0: M[i]//=5 if M[i]%3 == 0: M[i]//=3 L = [25,8,75,12] ChangeVal(L,4) for i in L: print(i,end="#")</pre> <p>a) 5#8#15#4# b) 5#8#5#4# c) 5#8#15#14# d) 5#18#15#4#</p>
40	<p>Suppose content of 'Myfile.txt' is</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>Humpty Dumpty sat on a wall Humpty Dumpty had a great fall All the king's horses and all the king's men Couldn't put Humpty together again</p> </div> <p>What will be the output of the following code?</p> <pre>myfile = open("Myfile.txt") record = myfile.read().split() print(len(record)) myfile.close()</pre> <p>a. 24 b. 25 c. 26 d. 27</p>
41	<p>Find the output of the following code:</p> <pre>Name="Python3.1" R="" for x in range(len(Name)): if Name[x].isupper(): R=R+Name[x].lower()</pre>

```

elif Name[x].islower():
    R=R+Name[x].upper()
elif Name[x].isdigit():
    R=R+Name[x-1]
else:
    R=R+"#"
print(R)

```

- a. pYTHOn##@
- b. pYTHOnN#@
- c. pYTHOn#@
- d. pYTHOnN@#

42

Suppose content of 'Myfile.txt' is

Honesty is the best policy.

What will be the output of the following code?

```

myfile = open("Myfile.txt")
x = myfile.read()
print(len(x))
myfile.close()

```

- a. 5
- b. 25
- c. 26
- d. 27

43

Suppose content of 'Myfile.txt' is

Culture is the widening of the mind and of the spirit.

What will be the output of the following code?

```

myfile = open("Myfile.txt")
x = myfile.read()
y = x.count('the')
print(y)
myfile.close()

```

- a. 2
- b. 3
- c. 4
- d. 5

44

What will be the output of the following code?

```

x = 3
def myfunc():
    global x
    x+=2
    print(x, end=' ')
print(x, end=' ')
myfunc()
print(x, end=' ')

```

- a. 3 3 3
- b. 3 4 5
- c. 3 3 5
- d. 3 5 5

45

Suppose content of 'Myfile.txt' is

```
Ek Bharat Shreshtha Bharat
```

What will be the output of the following code?

```
myfile = open("Myfile.txt")
vlist = list("aeiouAEIOU")
vc=0
x = myfile.read()
for y in x:
    if(y in vlist):
        vc+=1
print(vc)
myfile.close()
```

- a. 6
- b. 7
- c. 8
- d. 9

46

Suppose content of 'Myfile.txt' is

```
Twinkle twinkle little star
How I wonder what you are
Up above the world so high
Like a diamond in the sky
Twinkle twinkle little star
```

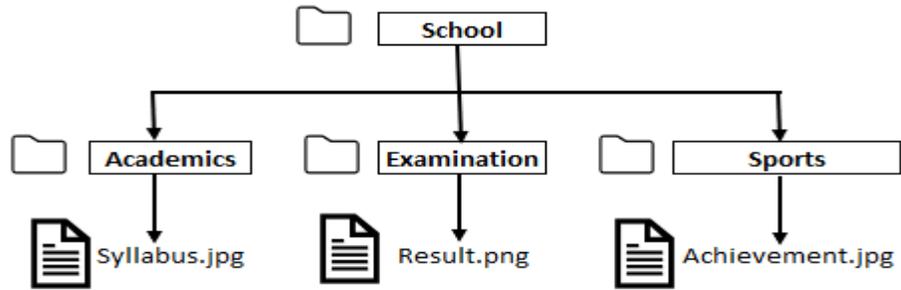
What will be the output of the following code?

```
myfile = open("Myfile.txt")
line_count = 0
data = myfile.readlines()
for line in data:
    if line[0] == 'T':
        line_count += 1
print(line_count)
myfile.close()
```

- a. 2
- b. 3
- c. 4
- d. 5

47

Consider the following directory structure.



Suppose root directory (School) and present working directory are the same. What will be the absolute path of the file Syllabus.jpg?

- a. School/syllabus.jpg
- b. School/Academics/syllabus.jpg
- c. School/Academics/./syllabus.jpg
- d. School/Examination/syllabus.jpg

48

Assume the content of text file, 'student.txt' is:

```
Arjun Kumar
Ismail Khan
Joseph B
Hanika Kiran
```

What will be the data type of data_rec?

```
myfile = open("Myfile.txt")
data_rec = myfile.readlines()
myfile.close()
```

- a. string
- b. list
- c. tuple
- d. dictionary

49

What will be the output of the following code?

```
tup1 = (1,2,[1,2],3)
tup1[2][1]=3.14
print(tup1)
```

- a. (1,2,[3.14,2],3)
- b. (1,2,[1,3.14],3)
- c. (1,2,[1,2],3.14)
- d. Error Message

Section-C
Case Study based Questions

This section consists of 6 Questions (50 -55) Attempt any 5 questions.

Rohit, a student of class 12, is learning CSV File Module in Python. During examination, he has been assigned an incomplete python code (shown below) to create a CSV File 'Student.csv' (content shown below). Help him in completing the code which creates the desired CSV File.

CSV File

```
1,AKSHAY,XII,A
2,ABHISHEK,XII,A
3,ARVIND,XII,A
4,RAVI,XII,A
5,ASHISH,XII,A
```

Incomplete Code

```
import _____ #Statement-1
fh = open(_____, _____, newline="") #Statement-2
stuwriter = csv._____ #Statement-3
data = [ ]
header = ['ROLL_NO', 'NAME', 'CLASS', 'SECTION']
data.append(header)
for i in range(5):
    roll_no = int(input("Enter Roll Number : "))
    name = input("Enter Name : ")
    Class = input("Enter Class : ")
    section = input("Enter Section : ")
    rec = [ _____ ] #Statement-4
    data.append(_____) #Statement-5
stuwriter. _____ (data) #Statement-6
fh.close()
```

50 Identify the suitable code for blank space in the line marked as Statement-1.

- a) csv file
- b) CSV
- c) csv
- d) cvs

51 Identify the missing code for blank space in line marked as Statement-2.

- a) "Student.csv","wb"
- b) "Student.csv","w"
- c) "Student.csv","r"
- d) "Student.cvs","r"

52 Choose the function name (with argument) that should be used in the blank space of line marked as Statement-3.

- a) reader(fh)
- b) reader(MyFile)
- c) writer(fh)
- d) writer(MyFile)

53	<p>Identify the suitable code for blank space in line marked as Statement-4.</p> <ul style="list-style-type: none">a) 'ROLL_NO', 'NAME', 'CLASS', 'SECTION'b) ROLL_NO, NAME, CLASS, SECTIONc) 'roll_no','name','Class','section'd) roll_no,name,Class,section
54	<p>Identify the suitable code for blank space in the line marked as Statement-5.</p> <ul style="list-style-type: none">a) datab) recordc) recd) insert
55	<p>Choose the function name that should be used in the blank space of line marked as Statement-6 to create the desired CSV File?</p> <ul style="list-style-type: none">a) dump()b) load()c) writerows()d) writerow()

Class XII Computer Science Sample MCQs



1. A Programmer is working in Python program which is function oriented. He/She is using the functions already available in python. These functions are called:

- a) User Defined Function
- b) Modular Function
- c) In-built Function
- d) Reusable Function

2. What is the area of memory called, which stores the parameters and local variables of a function call?

- a)Heap
- b)Queue
- c)Stack
- d)Array

3. CSV stands for

- a)Column Separated Values
- b)Comma Separated Values
- c)Comma Started Values
- d)Column Separated Values

4. What would be the minimum and maximum value of z (random module has already been imported)?

```
X=random(2,6)
```

```
Y= random(1,2)
```

```
Z=X+Y
```

```
print(Z)
```

- a)min:1 max:2
- b)min:2 max:6
- c)min:3 max:8
- d)min:1 max:8

5. A void function also returns a _____ value to its caller.

- a) int
- b) String
- c) None
- d) Boolean

6. Sam wants to vote for the upcoming election because his age is below 18. A python code is written to check his age .identify it is correct or incorrect.

```
Age=input("enter age:")
```

```
if Age<=18:
```

```
    print("you are not eligible to Vote")
```

a) Correct

b)Incorrect

7. What is the default mode of opening a file in python?

a)read

b)write

c)append

d)read and write

8. To read twelve characters from a file object f1, we use

a)f1.read(12)

b)f1.read()

c)f1.readline()

d)read(f1,12)

9. Consider a list num = [5, 10, 15, 20], which of the following will result in an error:-

a) num[0] += 3

b) num += 3

c) num *= 3

d) num[1] = 45

10. Find the operator which cannot be used with a string in Python from the following:-

a) //

b) *

c) +

d) in

11. Which of the following is not a feature of Python function:-

a) Modularity

b) Simplicity

c) Reusability

d) difficult to find error

12. Which is the correct dictionary declaration?

a)d1={1:'January',2:'February',3:'March'}

b)d2=(1:'January',2:'February',3:'March')

c)d3={1:'January',2:'February',3:'March'}

d)d4={1:January,2:February,3:March}

13. Consider a tuple in python named Months = ('Jul', 'Aug', 'Sep'). Identify the invalid statement(s) from the given below statements:-

a)S = Months[0]

b)print(Months[2])

c) Months[1] = 'Oct'

d)LIST1 =list(Months)

14. Which of the following expressions is an example of type casting?

a)4.0+float(6)

b)5.3+6.3

c)5.0+3

d)None of these

15. What will be the output after the following statements?

```
a = [0, 1, 2, 3]
```

```
del a[:]
```

```
print(a)
```

a)None

b)[]

c)[0, 1, 2, 3]

d)NameError

16. What will be the output after the following statements?

```
x = 27
```

```
y = 19
```

```
while x < 30 and y > 15:
```

```
x = x + 1
y = y - 1
print(x,y)
```

a) 26 11 b) 25 11 c) 30 16 d) 26 10

17. In which of the following file modes, the existing data of file will be lost?

- a)a b)ab c)rb d)w

18. Which is NOT the possible output of following program from given options:

```
import random
periph = ['Mouse', 'Keyboard', 'Printer', 'Monitor']
for i in range(random.randint(0,2)):
    print(periph[i], '*', end=" ")
```

(A) Mouse *Keyboard * (B) Mouse *Keyboard* Printer*
(C) Mouse * (D) No output

19. Find out the type of error if any-

```
if v < 5:
    print("Hello World")
else:
    print("Good to see you!")
```

a) No Error b) Declaration of v
c): with else not required d) Indentation Error

20. Which of the following is valid variable name:-

- a) Student name b) 3Number c)%name% d)Block_number

21. When you open a file for adding more data, if the file does not exist, an error occurs.

- a) True b) False

22. Consider square numbers defined as follows:

```
compute(1) = 1
compute(N) = compute(N-1) + 2N-1
```

According to this definition, what is compute (3)?

- a) compute(3) = compute(2) + compute(1) b) compute(3) = compute(2) - 2*3+1
b) compute(3) = compute(2) + 2*3-1 d) compute(3) = compute(3) + 2*3-1

23. The value of the expressions $4/(3*(4-2))$ and $4/3*(4-2)$ is the same.

- a) True b) False

24. What will the following code produce?

30. What will be the output of the following code?

```
tup1 = (1,2,[1,2],3)
tup1[2][1]=3.14
print(tup1)
```

- a. (1,2,[3.14,2],3) b. (1,2,[1,3.14],3) c. (1,2,[1,2],3.14) d. Error Message

31. Which of these about a dictionary is false?

- a) The values of a dictionary can be accessed using keys
- b) Dictionaries aren't ordered
- c) The keys of a dictionary can be accessed using values
- d) Dictionaries are mutable

32. Find and write the output of the following python code:

```
a=10
def call():
    global a
    a=15
    b=20
    print(a)
```

call()

- a)25 b)15 c)35 d)10

33. Which of the following Python codes will result in an error?

```
obj = 'a'
```

- a) pickle.dumps(obj) b) pickle.dumps(obj,3)
c) pickle.dumps(obj,3,True) d) pickle.dumps('a',2)

34. Identify the correct option to add new value 50 to existing tuple T

```
T = (11,22,33,44,55)
```

- a) T = T + 66 b) T = T + 66 c) T = T + (66,) d) T = T + (66)

35. Evaluate the expression :

```
a = [5,4,3,2,2,2,1]
a=a [ a [ a [ a [ 0 ] + 1 ] ] ]
print(a)
```

- a)3 b)4 c)5 d)2

36. Which of the following is the use of id() function in Python?

- a) Id returns the identity of the object
- b) Every object doesn't have a unique ID
- c) All of the mentioned
- d) None of the mentioned

37. What will be the output after the following statements?

```
x = 4
```

```
y = 8
```

```
while x + y < 20:
```

```
    print(x, end=' ')
```

```
    x += 2
```

a)0 2 4 6

b)4 6 8 10

c)0 2 4 6

d)0 2 4 8

38. What is the output of the following code snippet?

```
def ChangeVal(M,N):
```

```
    for i in range(N):
```

```
        if M[i]%5 == 0:
```

```
            M[i]//=5
```

```
        if M[i]%3 == 0:
```

```
            M[i]//=3
```

```
L = [25,8,75,12]
```

```
ChangeVal(L,4)
```

```
for i in L:
```

```
    print(i,end="#")
```

a) 5#8#15#4#

b) 5#8#5#4#

c) 5#8#15#14#

d) 5#18#15#4#

39. Evaluate the following expression and identify the correct answer.

$$18 - (1 + 2) * 5 + 2 ** 5 * 4$$

a) 131

b) 146

c) 181

d) 132

40. Suppose content of 'India.txt' is

India is a secular country

What will be the output of the following code?

```
fileread = open("India.txt")
```

```
volist = list("aeiouAEIOU")
```

```
vc=0
```

```
x =fileread.read()
```

```
for y in x:
```

```
    if y in volist:
```

```
        vc+=1
```

```
print(vc)
```

```
fileread.close()
```

a) 10

b) 7

c) 8

d) 9

41. Identify the output of the following Python statements.

```
x = [[10, 11, 12],[13, 14, 15]]
y = x[0][1]
print(y)
```

- a. 11
- b. 13
- c. 14
- d. 15

42. What is the output of the program given below:

```
import random
x = random.random()
y = random.randint(0,4)
print(int(x),":", y+int(x))
```

- a) 0 : 0
- b) 2 : 4
- c) 1 : 6
- d) 0 : 5

43. Assume the content of text file, 'student.txt' is:

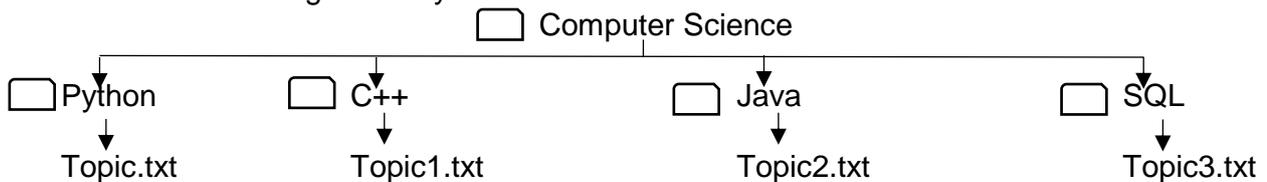
```
Kaustubh
Pranav Kumar
Dilshad
Amrita
```

What will be the data type of filedata?

```
fileread = open("student.txt")
filedata = fileread.readlines()
fileread.close()
```

- a. string
- b. list
- c. tuple
- d. dictionary

44. Consider the following directory structure.



Suppose root directory (Computer Science) and present working directory are the same. What will be the absolute path of the file Topic.txt?

- a) Computer Science/Topic.txt
- b) Computer Science/Python/Topic.txt
- c) Computer Science/Python/.../Topic.txt
- d) Computer Science/C++/Topic.txt

45. Suppose content of 'quote.txt' is

```
Don't stop until you are Proud.
```

What will be the output of the following code?

```
myfile = open("quote.txt")
record = myfile.read().split()
print(len(record))
myfile.close()
```

- a) 4 b) 5 c) 6 d) 7

46. Suppose content of 'Myfile.txt' is

```
Twinkle Twinkle little star
How I wonder what you are
Up above the world so high
Like a diamond in the sky
Twinkle Twinkle little star
```

What will be the output of the following code?

```
myfile = open("Myfile.txt")
line_count = 0
data = myfile.readlines()
for line in data:
    if line[0] == 'T':
        line_count += 1
print(line_count)
myfile.close()
```

- a) 2 b) 3 c) 4 d) 5

47.

Assertion (A): Parameters with default arguments can be followed by parameters with no default argument.

Reason (R): Syntactically, it would be impossible for the interpreter to decide which values match which arguments if mixed modes were allowed while providing default arguments.

- (a) A is true but R is false.
- (b) A is false but R is true.
- (c) Both A and R are false.
- (d) Both A and R are true but R is not the correct explanation of A.
- (e) Both A and R are true and R is the correct explanation of A.

48. Consider the following code:

```
import math, random
print(str(int(math.pow(random.randint(2,4),2))),end= ' ')
print(str(int(math.pow(random.randint(3,4),2))),end= ' ')
print(str(int(math.pow(random.randint(4,4),2))))
```

What could be the possible outputs out of the given four choices?

- (a) 2 3 4 (b) 9 16 16 (c) 16 4 16 (d) 2 4 9

49. Priya is trying to write a tuple num = (11,12,13,14,15) on a binary file number.bin. Consider the following code written by him.

```
import pickle
num = (11,12,13,14,15)
fileread = open("number.bin",'wb')
pickle._____ #Statement 1
fileread.close()
```

Identify the missing code in Statement 1.

- a) dump(fileread,num) b) dump(num, fileread)
c) write(num,fileread) d) load(fileread,num)

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Ayush of class 12 is writing a program to create a CSV file “studentdata.csv” which will contain Name and Phone no as entries. He has written the following code. As a programmer, help him to successfully execute the given task.

```
import _____ # Line 1
def add(Name,Phno):
    f=open(' studentdata.csv','_____') # Line 2
    newFileWriter = csv.writer(f)
    newFileWriter._____([Name,Phno]) # Line 3
    f.close()
def readfile():
    newFile = open(' studentdata.csv','r')
    newFileReader = csv._____ (newFile) # Line 4
    for row in newFileReader:
        print (row[0], “->”, row[1])
    newFile._____ # Line 5
add(“Pranav”, “9839988295”)
add(“Sunaina”, “7760412064”)
add(“Manish”, “9739556636”)
readfile() #Line 6
```

50. Name the module he should import in Line 1.

- (a) pickle (b) csv (c) file (d) random

51. In which mode, Shubham should open the file to add data into the file.(Line 2)

- (a) w+ (b) r (c) r+ (d) a

52. Fill in the blanks for Line 3 write the data to CSV file.

(a) writerow() (b) writerows() (c) Writerows() (d) writerRow()

53. Fill in the blank in Line 4 to read the data from a csv file.

(a) load() (b) read() (c) reader() (d) readline()

54. Fill in the blank in Line 5 to close the file..

(a) close() (b) Close() (c) CLOSE() (d) end()

55. Write the output he will obtain while executing Line 6.

(a) Pranav 9839988295

(c) Pranav -> 9839988295

Sunaina 7760412064

Sunaina -> 7760412064

Manish 9739556636

Manish -> 9739556636

(b) "Pranav" "9839988295"

(d) "Pranav" -> "9839988295"

"Sunaina" "7760412064"

"Sunaina" -> "7760412064"

"Manish" "9739556636"

"Manish" -> "9739556636"
