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NEET UG 2025

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RAPID REVISION

LIFE- SAVERS AND KNOW-HOW

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HOW TO PREPARE FOR NEET?

01 Make a Study Plan: Break down the syllabus, set daily and weekly goals.

02 Stick to NCERT: Focus on NCERT books for a strong foundation.

03 Practice Regularly: Solve mock tests and previous papers to improve speed.

04 Understand Concepts: Focus on understanding, not just memorizing

05 Stay Healthy: Take breaks, exercise, and maintain a balanced diet

06 Note down your mistake, and re-do the topics

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- World Ranked Universities
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Before students leave for their studies, they receive guidance on visa processes, travel logistics, cultural adaptation, and tips for adjusting to life abroad. This helps ensure a smooth transition.

3 Accommodation& Safety

Universities often provide assistance with finding suitable housing, either on-campus or through approved off-campus options. Safety protocols and emergency contacts are provided, ensuring students' well-being while studying.

4 Scholarship & Financial Aid

Institutions offer various scholarships, grants, and financial aid packages to help students manage tuition and living costs. Financial guidance and support are available to ensure affordability throughout their studies.

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- The curriculum adheres to global academic standards, enhancing employability.
- Degrees are accredited by reputable international bodies and organizations.
- Students gain access to international job markets, research, and networking.

Degrees from accredited institutions are recognized worldwide, ensuring graduates have access to international career opportunities and further education.

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2. ADVANCED CLINICAL EXPOSURE

- Students receive practical, hands-on training in top-tier medical facilities.
- Training under supervision by qualified medical professionals.
- Exposure to a wide range of medical cases, helping develop clinical judgment.
- Prepares students for real-world medical practice and enhances their employability.
- Opportunities for internships, rotations, and live patient care to build experience.

Students benefit from hands-on clinical training, working with experienced professionals in state-of-the-art medical facilities, enhancing their practical skills and knowledge.

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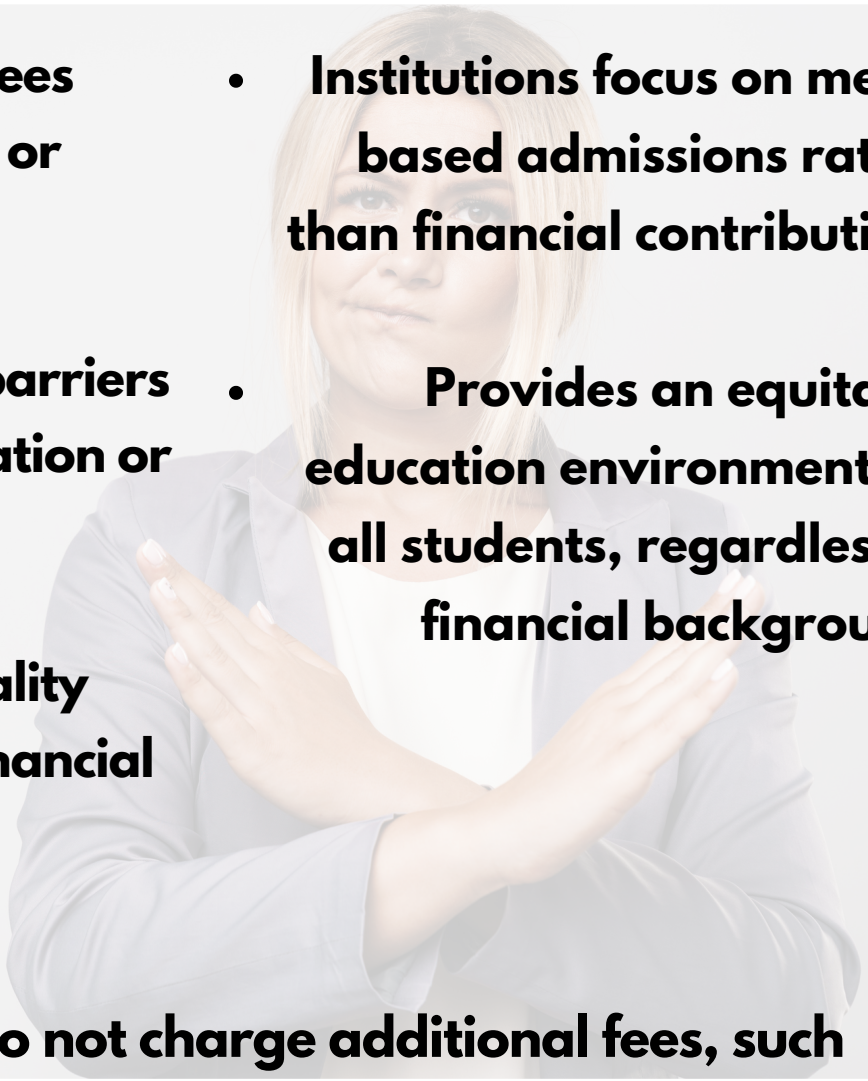
3. No donation capitation fees :

- Transparent tuition fees without hidden costs or additional charges.
- Eliminates financial barriers caused by hefty donation or capitation fees.
- Ensures access to quality education without financial strain.
- Institutions focus on merit-based admissions rather than financial contributions
- Provides an equitable education environment for all students, regardless of financial background.



These universities do not charge additional fees, such as donations or capitation fees, ensuring transparent and affordable tuition.

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4. High ROI:

- Graduates secure well-paying jobs in reputable hospitals, healthcare organizations, or research institutions.
- Cost-effective tuition fees with excellent employment prospects post-graduation.
- The quality of education and clinical exposure ensures a high career trajectory.
- Strong alumni networks provide valuable career support and opportunities.
- Fast career growth due to high demand for skilled professionals from reputed universities.

The quality of education and career prospects offered by these universities guarantee a strong return on investment, with graduates securing well-paying jobs and successful careers.

5. MCI,NMC,&WHO Approved universities:

- The universities are accredited by the Medical Council of India (MCI) and National Medical Commission (NMC), ensuring compliance with Indian medical standards.
- WHO recognition ensures alignment with global medical practices and educational standards.
- The universities follow international curricula and clinical training guidelines.
- Graduates are eligible for medical practice and licensing globally.
- These approvals ensure that the degrees awarded are valid for postgraduate education and employment worldwide.

The universities are recognized by major regulatory bodies like the Medical Council of India (MCI), National Medical Commission (NMC), and the World Health Organization (WHO), ensuring their programs meet global standards of excellence.

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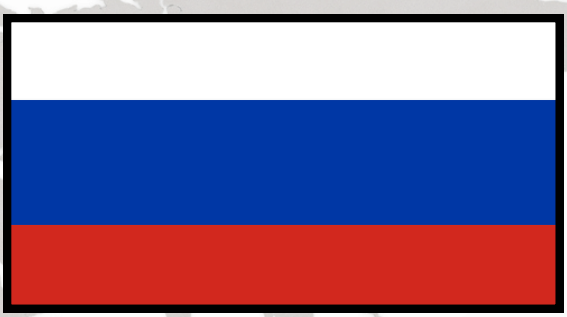
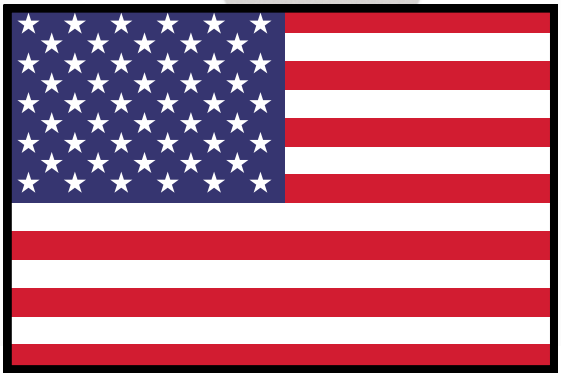
COUNTRIES WHICH WE COVER

We Are In 40+ Countries

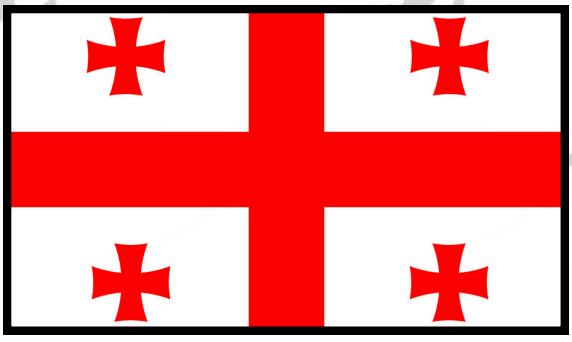
UK



RUSSIA



USA



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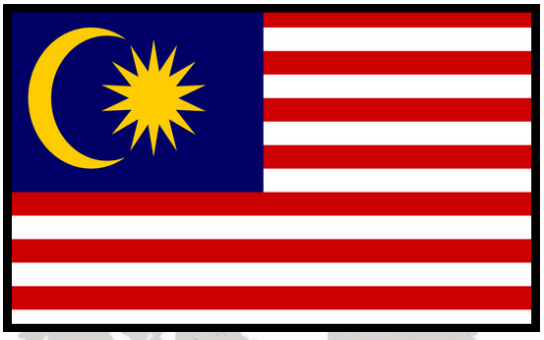
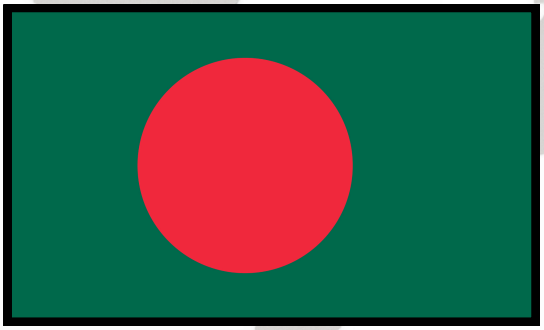


MALAYSIA

SERBIA



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SANTHEEP RAVICHANDRAN

★★★★★

One of the best educational consultancy that provides great assistance and career guidance. From securing admission till you reach the destination will be handled by team. They have all the best colleges in different countries to provide better career guidance to the students. Thankyou natva team for this wonderful opportunity

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CLIENTS REVIEWS

PRIYADHARSHINI

★★★★★

I express my heartfelt gratitude to NATVA EDUCATIONS PRIVATE LIMITED for their exceptional overseas consultancy services. The team's personalized counseling and meticulous guidance made my application process , loan assistance , career guidance, Visa approval has become smooth and stress-free. Their professionalism, attention to detail, and commitment to my success are truly commendable . I have successfully secured admission to my dream University. I highly recommend NATVA EDUCATIONS to any student aspiring to study abroad. Thank you for playing a pivotal role in shaping my academic journey. Looking forward to a continued relationship with your outstanding consultancy.

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EXAM CHECKLIST

PACK SMART

01.

- **FACE MASK** (COMPULSORY FOR SASFETY)
- **HAND SANITIZER** (SMALL BOTTLE)
- **WATER BOTTLE** (WITHOUT LABLE AND TRANSPARENT)
- **PEN/PENCIL** (BLUE OR BLACK INK PEN FOR SIGNATURE)
- **BALLPOINT PEN** (FOR FILLING OMR SHEET)

DOCUMENTS TO CARRY

02.

- **ARRIVE EARLY** (AT LEAST 30-45 MIN BEFORE THE SCHEDULED EXAM TIME)
- **KNOW YOUR EXAM CENTRE LOCATION** (DOUBLE CHECK THE ROUTE TO AVOID ANY LAST MIN ISSUES
- **CHECK FOR PROHOBITED ITEMS** (DON'T CARRY ITEMS LIKE WATCHES, JEWELRY,BAGS,MOBILE,CALCULATORS / ANY STUDY MATERIAL)

EXAM CENTER PREPARATION

03.

- **NEET ADMIT CARD** (DOWNLOADED AND PRINTED)
- **VALID PHOTO ID PROOF** (AADHAR CARD,PASSPORT, VOTER ID ETC.)
- **PASSPORT - SIZED PHOTOGRAPHS** (USUALLY 2-3)
- **SCRIBE REQUEST LETTER**(IF APPLICABLE)
- ANY OTHER REQUIRED DOCUMENTS

PERSONAL PREPARATIONS

04.

- **EAT A LIGHT, NUTRITIOUS MEAL** (TO KEEP YOUR ENERGY UP)
- **STAY HYDRATED** (BUT AVOID DRINKING TOO MUCH TO AVOID FREQUENT BATHROOM BREAKS)
- **SLEEP WELL THE NIGHT BEFORE** (GET ENOUGH REST DAY BEFORE EXAM TO ENSURE YOU'RE WELL - RESETED AND ALERT DURING EXAM)

MENTAL & EMOTIONAL PREPAREDNESS

05.

- **STAY CALM** (PRACTICE BREATHNG EXERCISES OR MEDITATION IN THE MORNING TO CALM ANY NERVES)
- **POSITIVE MINDSET** (REMIND YOURSELF TAT YOU'VE PREPARED WELL AND CAN HANDLE THE EXAM
- **FOCUS ON STRATEGY** (MOVE TO NEXT QUESTION IF YOU GET STUCK. DONT WASTE TOO MUCH TIME ON A DIFFICULT ONE

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EXAM STRESS? TRY THESE TIPS!

H

GET ENOUGH SLEEP

BEFORE GETTING INTO AN EXAM ROOM, YOUR MIND SHOULD HAVE HAD ENOUGH TIME TO REST AND REJUVEATE. AS A NEET ASPIRANT, YOU NEED TO GET A LEAST EIGHT HOURS OF SLEEP EVERY NIGHT, SO YOUR BRAIN FUNCTION AT ITS BEST. THE LAST THING YOU WANT TO DO WHEN EXAMS ARE AROUND THE CORNER IS PULLING ALL-NIGHTERS

E

CREATE A STUDY SCHEDULE

BREAK DOWN YOUR STUDY MATERIAL INTO MANAGEABLE CHUNKS AND ALLOCATE SPECIFIC TIMES FOR EACH SUBJECT. THIS REDUCES THE FEELING OF BEING OVERWHELMED . THE MAIN REASON WHY PEOPLE WORRY WHEN EXAM ARE CLOSE IS THAT THEY DIDN'T STUDY ENOUGH. IT'S HARD NOT TO BE STRESSED WHEN YOU KNOW FULL WELL YOU'RE NOT READY TO SIT FOR EXAM

A

EAT HEALTHY FOODS

AVOID JUNK FOOD BECAUSE THIS ONLY CAUSE YOU TO BE SLOW AND UNPRODUCTIVE. INVEST IN FRUITS AND VEGETABLES AS THESE FOODS HAVE THE NUTRIENTS TO BOOST YOUR BRAIN ACTIVITY.HAVING BALANCED DIET HELPS YOUR BODY AND MIND STAY ENERGIZED. AVIOD TOO MUCH CAFFEINE OR SUGAR, AS IT CAN LEAD TO ENERGY CRASHES AND ANXIETY.

L

PRACTICE MEDITATION AND STAY ACTIVE

THESE TECHNIQUES CAN HELP YOU STAY PRESENT AND CALM, RUEDUCING OVERALL STRESS LEVELS. WHEN FEELING STRESSED,TAKE DEEP ,SLOW BREATHS.IT CAN HELP CALM YOUR MIND AND REDUCE ANXIETY. PHYSICAL ACTIVITY HELPS BY RELEASING ENDORPHINS.TRY GOING FOR A WALK, STRETCHING,OR DOING A SHORT WORKOUT.

T

STAY POSITIVE

REPLACE NEGATIVE THOUGHTS WITH POSITIVE AFFIRMATION. REMIND YOURSELF THAT YOU'VE PREPARED WELL AND CAN HANDLE THE CHALLENGE.BEFORE YOU GET INTO AN EXAM ROOM, UNDERSTAND THAT YOU'RE HUMAN,AND PERFECTION IS ONLY AN ILLUSION. IF YOU'VE GONE THROUGH ALL YOUR NOTES, YOU HAVE NO REASON TO BE WORRIED.

H

HAVE EMOTIONAL HELP

IF YOU'RE FEELING STUCK OR OVERWHELMED, TALK TO A FRIEND ,OR FAMILY MEMBERS OR PSYCHOLOGIST FOR SUPPORT .SOMETIMES,JUST SHARING YOUR FEELINGS CAN REDUCE STRESSYOUR EMOTIONAL WELL- BEING IS JUST AS IMPORTANT AS YOUR ACADEMIC PERFORMANCE. TAKING CARE OF YOUR MENTAL HEALTH WILL NOT ONLY HELP YPO FELL BETTER, BUT IT CAN ALSO IMPROVE YOUR FOCUS AND PERFORMANCE DURING EXAM.

STUDY PLAN

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MORNING SESSION (4 HOURS)

FOCUS ON THEORY AND CONCEPT LEARNING , AS YOUR MIND IS FRESH IN THE MORNING

- ***2 HOURS OF PHYSICS***
- ***2 HOURS OF CHEMISTRY***

AFTERNOON SESSION (3 - 4 HRS)

PRACTICE AND PROBLEM - SOLVING

- ***1.5 HOURS OF BIOLOGY***
- ***1.5 HOURS OF CHEMISTRY***

EVENING SESSION (2 HRS)

REVISION AND LIGHT PROBLEM - SOLVING . KEEP THIS SESSION FOCUSED ON STRENGTHENING YOUR WEAK AREAS

- ***1 HOUR OF BIOLOGY OR CHEMISTRY***
- ***1 HOUR OF PHYSICS***

NIGHT SESSION (OPTIONAL - 1 HOUR)

REVIEW NOTES , WORK ON MCQs , OR TAKE A MOCK TEST

- ***REVISE KEY CONCEPTS OR TAKE A SHORT MOCK TEST***

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NEET UPDATE 2025

NEET 2025 ADMIT CARD	MAY 1 ,2025
NEET 2025 EXAM	MAY 4,2025
NEET 2025 EXAM RESULT	JUNE 14 , 2025
LAST YEAR PASSING RATE	1,145,976 APPROX.56%
DURATION	3 HOURS AND 20 MIN

FOR NEET 2025 , THE EXPECTED CUT OFF MARK FOR GOVERNMENT MEDICAL COLLEGE IN TAMIL NADU ARE

- General (UR/EWS): 720–162 marks
- OBC/SC/ST: 161–127 marks
- UR/EWS-PwD: 160–150 marks
- OBC/SC/ST-PwD: 150–130 marks

HOW TO BE CONSIDERED FOR MERIT LIST

- Students with higher scores in Biology (Botany and Zoology) are considered first
- If there is a tie, then the student with higher marks in Chemistry is considered
- If there is still a tie, then the student with higher marks in Physics is considered
- If there is still a tie, then the student with fewer incorrect answers is considered

1. 1. Under isothermal condition, a gas at 300 K expands from 0.1L to 0.25L against a constant external pressure of 2 bar. The work done by the gas is :- [Given that 1L bar = 100 J]

(1) -30 J

(2) 5kJ

(3) 25 J

(4) 30 J

Ans. (1)

2. 2. A compound is formed by cation C and anion A. The anions form hexagonal close packed (hcp) lattice and the cations occupy 75% of octahedral voids. The formula of the compound is :-

(1) C2A3

(2) C3A2

(3) C3A4

(4) C4A3

Ans. (3)

3. 3. pH of a saturated solution of Ca(OH)2 is 9. The solubility product (Ksp) of Ca(OH)2 is :-

(1) 0.5 - 10-15

(2) 0.25 - 10-10

(3) 0.125 - 10-15

(4) 0.5 - 10-10

Ans. (1)

4. 4. The number of moles of hydrogen molecules required to produce 20 moles of ammonia through Haber's process is :-

(1) 10

(2) 20

(3) 30

(4) 40

Ans. (3)

5. 5. For an ideal solution, the correct option is :-

(1) Dmix S = 0 at constant T and P

(2) Dmix V - 0 at constant T and P

(3) Dmix H = 0 at constant T and P

(4) Dmix G = 0 at constant T and P

Ans. (3)

6. 7. Among the following, the one that is not a green house gas is :- FINAL NEET(UG)-2019 EXAMINATION CHEMISTRY

(1) nitrous oxide

(2) methane

(3) ozone

(4) sulphur dioxide

Ans. (4)

7. 8. The number of sigma (s) and pi (p) bonds in pent-2-en-4-yne is :-

(1) 10 s bonds and 3p bonds

(2) 8 s bonds and 5p bonds

(3) 11 s bonds and 2p bonds

(4) 13 s bonds and no p bond

Ans. (1)

8. 9. Which of the following diatomic molecular species has only p bonds according to Molecular Orbital Theory ?

(1) O2

(2) N2

(3) C2

(4) Be2

Ans. (3)

9. 10. Which of the following reactions are disproportionation reaction ? (a) 2Cu+ - Cu2+ + Cu0 (b) 3MnO4 2- + 4H+ - 2MnO4 - + MnO2 + 2H2O (c) 2KMnO4 D - K2MnO4 + MnO2 + O2 (d) 2MnO4 - + 3Mn2+ + 2H2O - 5MnO2 + 4H- Select the correct option from the following :-

(1) (a) and (b) only

(2) (a), (b) and (c)

(3) (a), (c) and (d)

(4) (a) and (d) only

Ans. (1)

10. 11. Among the following, the narrow spectrum antibiotic is :-

(1) penicillin G

(2) ampicillin

(3) amoxycillin

(4) chloramphenicol

Ans. (1)

11. 12. The correct order of the basic strength of methyl substituted amines in aqueous solution is :-

(1) (CH3)2NH > CH3NH2 > (CH3)3N

(2) (CH3)3N>CH3NH2 > (CH3)2NH

(3) (CH3)3N>(CH3)2NH>CH3NH2

(4) CH3NH2>(CH3)2NH > (CH3)3N

Ans. (1)

12. 13. Which mixture of the solutions will lead to the formation of negatively charged colloidal [AgI] I- sol. ? 2

(1) 50 mL of 1M AgNO3 + 50 mL of 1.5 M KI

(2) 50 mL of 1M AgNO3 + 50 mL of 2 M KI

(3) 50 mL of 2 M AgNO3 + 50 mL of 1.5 M KI

(4) 50 mL of 0.1 M AgNO3 + 50 mL of 0.1 M KI

Ans. (1,2)

13. 14. Conjugate base for Bronsted acids H2O and HF are:-

(1) OH- and H2F+ respectively

(2) H3O+ and F -, respectively

(3) OH - and F -, respectively

(4) H3O+ and H2F+, respectively

Ans. (3)

14. 15. Which will make basic buffer ? CH3COOH NaOH NH4OH

(1) 50 mL of 0.1 M NaOH + 25 mL of 0.1 M

(2) 100 mL of 0.1 M CH3COOH + 100 mL of 0.1M

(3) 100 mL of 0.1 M HCl + 200 mL of 0.1 M

(4) 100 mL of 0.1 M HCl + 100 mL of 0.1 M NaOH

Ans. (3)

15. 16. The compound that is most difficult to protonate is:- O H 3 O H 3 O CH3 O H

(1) H

(2) H C

(3) H C

(4) Ph

Ans. (4)

16. 17. The most suitable reagent for the following conversion is :- H C-C C-CH 3 3 - H C 3 H CH3 H cis-2-butene

(1) Na/liquid NH3

(2) H2, Pd/C, quinoline (3) Zn/HCl

(3) nan

(4) Hg2+/H+, H2O

Ans. (2)

17. 18. Which of the following species is not stable ?

(1) [SiF6]2-

(2) [GeCl6]2-

(3) [Sn(OH)6]2-

(4) [SiCl6]2-

Ans. (4)

18. 19. Which of the following is an amphoteric hydroxide?

(1) Sr(OH)2

(2) Ca(OH)2

(3) Mg(OH)2

(4) Be(OH)2

Ans. (4)

19. 20. The structure of intermediate A in the following reaction is :- O2 CH CH3 CH3 A H + H O 2 OH + O H C 3 CH3 O CH CH3 CH3 H C-C-O-O-H 3 CH3 O-O-CH CH3 CH3 HC CH -O-O-H 2 CH3

(1) nan

(2) nan

(3) nan

(4) nan

Ans. (2)

20. 21. The manganate and permanganate ions are tetrahedral, due to oxygen with d-orbitals of manganese oxygen with p-orbitals of managanese oxygen with d-orbitals of manganese

(1) The p-bonding involves overlap of p-orbitals of

(2) There is no p-bonding (3) The p-bonding involves overlap of p-orbitals of (4) The p-bonding involves overlap of d-orbitals of ***Ans. (1)***

21. 22. For the second period elements the correct increasing order of first ionisation enthalpy is :- 3

(1) Li < Be < B < C < N < O < F < Ne

(2) Li < B < Be < C < O < N < F < Ne

(3) Li < B < Be < C < N < O < F < Ne

(4) Li < Be < B < C < O < N < F < Ne

Ans. (2)

22. 23. If the rate constant for a first order reaction is k, the time (t) required for the completion of 99% of the reaction is given by :-

(1) t = 0.693/k

(2) t = 6.909/k

(3) t = 4.606/k

(4) t = 2.303/k

Ans. (3)

23. 24. Identify the incorrect statement related to PCl5 from the following :- 120- with each other with each other P-Cl bonds

(1) Three equatorial P-Cl bonds make an angle of

(2) Two axial P-Cl bonds make an angle of 180-

(3) Axial P-Cl bonds are longer than equatorial

(4) PCl5 molecule is non-reactive

Ans. (4)

24. 25. 4d, 5p, 5f and 6p orbitals are arranged in the order of decreasing energy. The correct option is :-

(1) 5f > 6p > 5p > 4d

(2) 6p > 5f > 5p > 4d

(3) 6p > 5f > 4d > 5p

(4) 5f > 6p > 4d > 5p

Ans. (1)

25. 26. The biodegradable polymer is :-

(1) nylon-6,6

(2) nylon 2-nylon 6

(3) nylon-6

(4) Buna-S

Ans. (2)

26. 27. Match the Xenon compounds in Column-I with its structure in Column-II and assign the correct code:- Column-I Column-II (a) XeF4 (i) pyramidal (b) XeF6 (ii) square planar (c) XeOF4 (iii) distorted octahedral (d) XeO3 (iv) square pyramidal Code : (a) (b) (c) (d) (ii) (iii) (iv) (iii) (iv) (i) (iii) (i) (iv) (iv) (i) (ii)

(1) (i)

(2) (ii)

(3) (ii)

(4) (iii)

Ans. (2)

27. 28. Which is the correct thermal stability order for H2E (E=O, S, Se, Te and Po) ?

(1) H2S < H2O < H2Se < H2Te < H2Po

(2) H2O < H2S < H2Se < H2Te < H2Po

(3) H2Po < H2Te < H2Se < H2S < H2O

(4) H2Se < H2Te < H2Po < H2O < H2S

Ans. (3)

28. 29. The correct structure of tribromooctaoxide is :- O O O O O O - O O O O - O O - -O-Br-Br-Br=O -O O O O - O - O - - O O O - O - O O

(1) O=Br-Br-Br=O

(2) O=Br-Br-Br-O

(3) nan

(4) O=Br-Br-Br-O

Ans. (1)

29. 30. An alkene "A" on reaction with O3 and Zn-H2O gives propanone and ethanal in equimolar ratio. Addition of HCl to alkene "A" gives "B" as the major product. The structure of product "B" is :- 2 2 CH3 CH3 3 2 3 CH Cl 2 3 2 3 CH3 Cl 3 CH3 CH3 Cl

(1) Cl-CH -CH -CH

(2) H C-CH -CH-CH

(3) H C-CH -C-CH

(4) H C-CH-CH

Ans. (3)

30. 31. Enzymes that utilize ATP in phosphate transfer require an alkaline earth metal (M) as the cofactor. M is :

(1) Be

(2) Mg

(3) Ca

(4) Sr

Ans. (2)

31. 32. Which one is malachite from the following ? 4

(1) CuFeS2

(2) Cu(OH)2

(3) Fe3O4

(4) CuCO3.Cu(OH)2

Ans. (4)

32. 33. Which of the following series of transitions in the spectrum of hydrogen atom falls in visible region ?

(1) Lyman series

(2) Balmer series

(3) Paschen series

(4) Brackett series

Ans. (2)

33. 34. The mixture that forms maximum boiling azeotrope is :

(1) Water + Nitric acid

(2) Ethanol + Water

(3) Acetone + Carbon disulphide

(4) Heptane + Octane

Ans. (1)

34. 36. In which case change in entropy is negative ?

(1) Evaporation of water

(2) Expansion of a gas at constant temperature

(3) Sublimation of solid to gas

(4) 2H(g) - H2(g)

Ans. (4)

35. 37. Match the following : (a) Pure nitrogen (i) Chlorine (b) Haber process (ii) Sulphuric acid (c) Contact process (iii) Ammonia (d) Deacon's process (iv) Sodium azide or Barium azide Which of the following is the correct option ? (a) (b) (c) (d) (ii) (iii) (iv) (iv) (i) (iii) (iv) (ii) (i) (iii) (ii) (i)

(1) (i)

(2) (ii)

(3) (iii)

(4) (iv)

Ans. (4)

36. 38. Which of the following is incorrect statement ?

(1) PbF4 is covalent in nature

(2) SiCl4 is easily hydrolysed

(3) GeX4 (X = F, Cl, Br, I) is more stable than GeX2

(4) SnF4 is ionic in nature

Ans. (1)

37. 39. The non-essential amino acid among the following is :

(1) valine

(2) leucine

(3) alanine

(4) lysine

Ans. (3)

38. 40. A gas at 350 K and 15 bar has molar volume 20 percent smaller than that for an ideal gas under the same conditions. The correct option about the gas and its compressibility factor (Z) is :

(1) Z > 1 and attractive forces are dominant

(2) Z > 1 and repulsive forces are dominant

(3) Z < 1 and attractive forces are dominant

(4) Z < 1 and repulsive forces are dominant

Ans. (3)

39. 41. Among the following, the reaction that proceeds through an electrophilic substitution is : N Cl 2 Cl + N2 Cu Cl 2 2 Cl2 + Cl + HCl AlCl3 Cl2 + Cl Cl Cl Cl Cl Cl UV light CH OH + HCl 2 CH Cl + H O 2 2 heat 5

(1) nan

(2) nan

(3) nan

(4) nan

Ans. (2)

40. 42. The major product of the following reaction is : COOH COOH + NH3 strong heating COOH CONH2 NH O O NH2 COOH NH2 NH2

(1) nan

(2) nan

(3) nan

(4) nan

Ans. (2)

41. 43. For the chemical reaction N2(g) + 3H2(g) - 2NH3(g) the correct option is : - - - - - - - - - - = - 2 3 d H d NH 1 1 3 dt 2 dt - - - - - - - - - = 2 3 d N d NH 2 dt dt - - - - - - - - - = 2 3 d N d NH 1 dt 2 dt - - - - - - - - = 2 3 d H d NH 3 2 dt dt

(1) nan

(2) nan

(3) nan

(4) nan

Ans. (3)

42. 44. What is the correct electronic configuration of the central atom in K4[Fe(CN)6] based on crystal field theory ? 4 2 2g g t e 6 0 2g g t e 3 3 2 e t 4 2 2 e t

(1) nan

(2) nan

(3) nan

(4) nan

Ans. (2)

43. 45. The method used to remove temporary hardness of water is : 1

(1) Calgon's method

(2) Clark's method

(3) Ion-exchange method

(4) Synthetic resins method

Ans. (2)

44. 46. In which of the following processes, heat is neither absorbed nor released by a system ?

(1) isothermal

(2) adiabatic

(3) isobaric

(4) isochoric

Ans. (2)

45. 47. Increase in temperature of a gas filled in a container would lead to :

(1) increase in its mass

(2) increase in its kinetic energy

(3) decrease in its pressure

(4) decrease in intermolecular distance

Ans. (2)

46. 48. The total energy of an electron in an atom in an orbit is -3.4 eV. Its kinetic and potential energies are, respectively :

(1) -3.4 eV, -3.4 eV
(2) -3.4 eV, -6.8 eV
(3) 3.4 eV, -6.8 eV
(4) 3.4 eV, 3.4 eV
Ans. (3)

47. 49. R R +6V A 1 B 1 0 LED (Y) 0 The correct Boolean operation represented by the circuit diagram drawn is :

(1) AND
(2) OR
(3) NAND
(4) NOR
Ans. (3)

48. 50. A block of mass 10 kg is in contact against the inner wall of a hollow cylindrical drum of radius 1 m. The coefficient of friction between the block and the inner wall of the cylinder is 0.1. The minimum angular velocity needed for the cylinder to keep the block stationary when the cylinder is vertical and rotating about its axis, will be : (g = 10 m/s2) 10 rad/s p 10 2 rad/s PHYSICS TEST PAPER WITH ANSWER

(1) nan
(2) nan
(3) 10 rad/s
(4) 10p rad/s
Ans. (3)

49. 51. Body A of mass 4m moving with speed u collides with another body B of mass 2m, at rest. The collision is head on and elastic in nature. After the collision the fraction of energy lost by the colliding body A is : 9 9 9 9

(1) 1
(2) 8
(3) 4
(4) 5
Ans. (2)

50. 52. The speed of a swimmer in still water is 20 m/s. The speed of river water is 10 m/s and is flowing due east. If he is standing on the south bank and wishes to cross the river along the shortest path, the angle at which he should make his strokes w.r.t. north is given by :

(1) 30- west
(2) 0-
(3) 60- west
(4) 45- west
Ans. (1)

51. 53. A mass m is attached to a thin wire and whirled in a vertical circle. The wire is most likely to break when :

(1) the mass is at the highest point
(2) the wire is horizontal
(3) the mass is at the lowest point
(4) inclined at an angle of 60- from vertical
Ans. (3)

52. 54. The displacement of a particle executing simple harmonic motion is given by y = A0 + Asinwt + Bcoswt.

Then the amplitude of its oscillation is given by : + + 2 2 0 A A B + 2 2 A B + + 2 2 0 A (A B)

(1) nan

(2) nan

(3) nan

(4) A + B

Ans. (2)

53. 55. A 800 turn coil of effective area 0.05 m2 is kept perpendicular to a magnetic field 5 - 10-5 T. When the plane of the coil is rotated by 90- around any of its coplanar axis in 0.1 s, the emf induced in the coil will be : 2

(1) 2 V

(2) 0.2 V

(3) 2 - 10-3 V

(4) 0.02 V

Ans. (4)

54. 56. Average velocity of a particle executing SHM in one complete vibration is : w A 2 w2 A 2

(1) nan

(2) Aw

(3) nan

(4) Zero

Ans. (4)

55. 58. A copper rod of 88 cm and an aluminum rod of unknown length have their increase in length independent of increase in temperature. The length of aluminum rod is : (aCu = 1.7 - 10-5 K-1 and aAl = 2.2 - 10-5 K-1)

(1) 6.8 cm

(2) 113.9 cm

(3) 88 cm

(4) 68 cm

Ans. (4)

56. 59. The unit of thermal conductivity is :

(1) J m K-1

(2) J m-1 K-1

(3) W m K-1

(4) W m-1 K-1

Ans. (4)

57. 60. When a block of mass M is suspended by a long wire of length L, the length of the wire become (L+l). The elastic potential energy stored in the extended wire is :- 2 Mgl 2 MgL

(1) Mgl

(2) MgL

(3) 1

(4) 1

Ans. (3)

58. 61. A disc of radius 2m and mass 100 kg rolls on a horizontal floor. Its centre of mass has speed of 20 cm/s. How much work is needed to stop it ?

(1) 3J

(2) 30 kJ

(3) 2 J

(4) 1 J

Ans. (1)

59. 62. In an experiment, the percentage of error occurred in the measurment of physical quantities A, B, C and D are 1%, 2%, 3% and 4% respectively. Then the maximum percentage of error in the measurement X, where = 2 1/2 1/3 3 A B X C D , will be : - - - - - - 3 % 13

(1) nan

(2) 16%

(3) -10%

(4) 10%

Ans. (2)

60. 63. A body weighs 200 N on the surface of the earth. How much will it weigh half way down to the centre of the earth ?

(1) 150 N

(2) 200 N

(3) 250 N

(4) 100 N

Ans. (4)

61. 64. Which colour of the light has the longest wavelength ?

(1) red

(2) blue

(3) green

(4) violet

Ans. (1)

62. 65. A solid cylinder of mass 2 kg and radius 4 cm is rotating about its axis at the rate of 3 rpm. The torque required to stop after 2p revolutions is :

(1) 2 - 10-6 N m

(2) 2 - 10-3 N m

(3) 12 - 10-4 N m

(4) 2 - 106 N m

Ans. (1)

63. 66. The radius of circle the period of revolution initial position and sense of revolution are indicated in the fig. 3m x y P(t=0) T=4s y-projection of the radius vector of rotating particle P is : p - - = - - - - t y(t) 4sin , 2 where y in m p - - = - - - - 3 t y(t) 3cos , 2 where y in m p - - = - - - - t y(t) 3cos , 2 where y in m

(1) y(t) = -3cos2pt, where y in m

(2) nan

(3) nan

(4) nan

Ans. (4)

64. 67. A hollow metal sphere of radius R is uniformly charged. The electric field due to the sphere at a distance r from the centre : increases for r > R increases for r > R 3

(1) increases as r increases for r < R and for r > R

(2) zero as r increases for r < R, decreases as r

(3) zero as r increases for r < R, increases as r

(4) decreases as r increases for r < R and for r > R

Ans. (2)

65. 68. In which of the following devices, the eddy current effect is not used ?

(1) induction furnace

(2) magnetic braking in train

(3) electromagnet

(4) electric heater

Ans. (4)

66. 69. Six similar bulbs are connected as shown in the figure with a DC source of emf E, and zero internal resistance. The ratio of power consumption by the bulbs when (i) all are glowing and (ii) in the situation when two from section A and one from section B are glowing, will be : A B E

(1) 4 : 9

(2) 9 : 4

(3) 1 : 2

(4) 2 : 1

Ans. (2)

67. 70. At a point A on the earth's surface the angle of dip, d = +25-. At a point B on the earth's surface the angle of dip, d = -25-. We can interpret that : hemisphere. is located in the northern hemisphere. is located in the southern hemisphere. hemisphere

(1) A and B are both located in the northern

(2) A is located in the southern hemisphere and B

(3) A is located in the northern hemisphere and B

(4) A and B are both located in the southern

Ans. (3)

68. 71. A force F = 20 + 10y acts on a particle in y-direction where F is in newton and y in meter. Work done by this force to move the particle from y = 0 to y = 1 m is :

(1) 30 J

(2) 5 J

(3) 25 J

(4) 20 J

Ans. (3)

69. 72. Pick the wrong answer in the context with rainbow. reflections in a water drop, a secondary rainbow is formed. rainbow. is towards the sun. refraction and reflection sunlight.

(1) When the light rays undergo two internal

(2) The order of colours is reversed in the secondary

(3) An observer can see a rainbow when his front

(4) Rainbow is a combined effect of dispersion

Ans. (3)

70. 73. A cylindrical conductor of radius R is carrying a constant current. The plot of the magnitude of the magnetic field, B with the distance d, from the centre of the conductor, is correctly represented by the figure : B R d B R d B R d B R d 4