TIME : 45 Minutes

APPENDIX - 'D'

ENTRY LEVEL TEST

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TO THE STUDENT

This evaluation test is divided into two sections Section A contains 14 questions that require you to go to a specific laboratory seat, perform a task and then record an answer on the space provided in the answer sheet or respond to a multiple choice question. Be careful you mark the multiple choice response against the right question number on your answer sheet. Section B contains 28 multiple and other types of questions. If you skip a question to return later remmober to skip that question number on the answer sheet as well. All questions in both sections are numbered consecutively starting with 1 and continuing upto 42.

Do not write in this cyclostyled booklet.

Sample Question	Sample Answer
33. Two plus two equals	33. (a) (b) (c) (d)
a) One	
b) Two	
c) Three	
d) Four	

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PART - A

Q.1. Go to seat 1 and examine the colour of the gas in the gas Jar. Tick the correct alternative.

(a) Brown Red (b) Voilet (c) Greenish Yellow

(d) Colourless.

Q.2. Go to seat 2 and examine the colour of the gas in the gas jar. Tick the correct alternative.

(a) Rotten eggs (b) Rungent (c) Odourless

(d) Burning. Sulphur.

Q.3. Go to seat 3 and examine the three salts (labelled I,II,III) provided. The salts may be ranked according to their crystal size with the smallest crystal placed first. Tick the correct arrangement ?

(a) I, II III (b) II, III, I

(c) III, I, II (d) II, I, III

Q.4. Go to seat 4 and and pick up one of the glass tubes and bend it at 90° at the centre.

Q.5. Go to seat 5 and pick up one of the corks and drill a hole in it by the help of a cork borer.

Q.6. Go to seat 6 and fit up a wash bottle, you are provided with a flat bottom flask, a cork with two holes, a glass tubing bent at 135°, a glass tubing bent at 45° having a nozzle at one end. Before leaving the seat dismantle the wash bottle

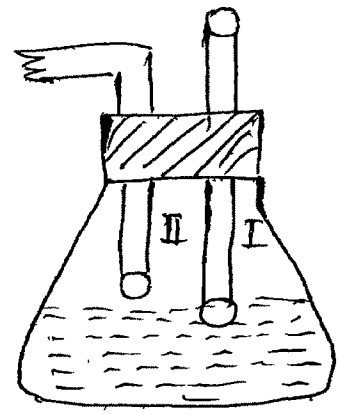
Q.7. Examine the picture of the assembled laboratory equipment Overleaf. Now go to seat 7 and examine the actual assembly The assembly is set up.

(a) Correctly.

(b) Incorrectly at I.

(c) Incorrectly at II.

(d) Incorrectly at I & II.



Q.8. Go to seat 8 and examine a boiling tube fitted with a cork and two glass tubings. Identify the leak in the assembled apparatus with the help of a gas jar full of water.

Q.9. Go to seat 9 and examine the graduated cylinder containing coloured water. The volume of the coloured solution is:-

(a) 12.8 ml (b) 13.2. ml-

(b) 12.3. ml (d) 13.1. ml.

Q.10. Go to seat 10 and determine the weight of the object provided. Record the weight at the bottom of the answer sheet against item 10.

NOTE : Before leaving the seat, return all weights to the weight box and bring the chemical balance to the resting position.

Q.11. Go to seat 11 and examine the four laboratory equipments marked (I——>IV) provided which piece of equipment is round bottomed flask. Tick the correct alternative.

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

Q.12. Go the seat 12 and find a piece of white paper on which a straight line is drawn. Measure the length of the straight line with the help of a scale and note it down at the end of item 12 on the answer sheet.

Q.13. Go to seat 13 and using PH paper provided, measure the PH of the solution in the test tube. Record the value of PH at the end of item 13 on the answer sheet

Q.14. Go to seat 14 and pipette out 25.0 ml of Oxalic Acid from the beaker in a conical flask. Add 2-3- drops of phenolpthalein indicator to it and stirr. Titrate the acid with sodium hydroxide solution in the burette untill a very faint permanant pink colour is obtained. The volume of sodium hydroxide solution used is:

Tick the correct alternative.

(a) 48.0 ml. (b) 48.5 ml. (c) 49.0 ml.

(d) 45.0 ml.

P A R T - B

Q.15. The Quality of glass tubing for bending should be Tick the correct alternative.

(a) Pyrex glass (b) Corning glass

(c) Soda glass (d) None of the above

Q.16. The Quality of chemicals used for the preparation of molar solution for volumeteric analysis should be. Tick the correct alternative.

(a) Laboratory quality (b) Anular quality.

(c) Local Peck quality (d) Industrial quality.

Q.17. The termperature at the time of boiling of a solution remains Tick the correct alternative.

(a) Unchanged for a long time.

(b) Changes very quickly.

(c) Does not change at all.

(d) None of the above.

Q.18. The temperature at the time of melting of a substance is Tick the correct alternative.

(a) When it starts changing into a liquid.

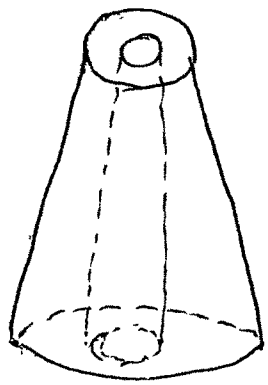
(b) When it starts solidifying.

(c) Average of these two temperatures.

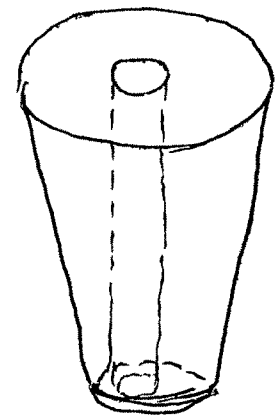
(d) None of the above.

Q.19. Tick the correct position of a cork while it is being bored.

(A)



(B)



Q.20. Which of the following pieces of laboratory equipment would be best to measure 9.0 ml of liquid most accurately Tick the correct alternative.

(a) 25 ml graduated cylinder.

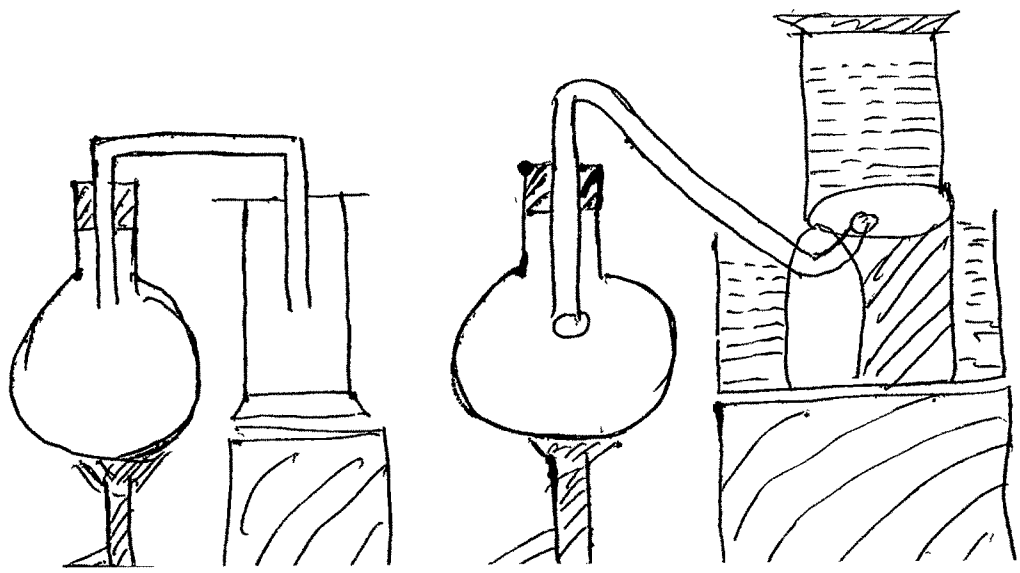
(b) 10 ml graduated cylinder

(c) 25 ml graduated beaker.

(d) 10 ml pipette.

Q.21. Which of the Pictures represent the correct method of collecting oxygen gas. Tick the correct alternative.

(A)



Q.22. Phenolpthalein is an indicator which is used in volumeteric titrations in certain combination of an acid and an alkali. Tick the correct alternative. 3/50

(a) Strong Acid against strong Base.

(b) Strong Acid against weak Base.

(c) Weak Acid against Strong Base.

(d) Weak Acid against Weak Base.

Q.23. When 250ml of M/10 Oxalic acid is prepared, the amount of Oxalic acid to be dissolved is (The Molecular Weight of Oxalic Acid = 126). Tick the correct alternative.

(a) 3.15 g (b) 3.51 g (c) 5.31 g (d) 5.13 g

Q.24. 5.30 g of Na_2CO_3 are dissolved in distilled water and the volume is made upto 250ml. The molarity of the solution is (Molecular weight of Na_2CO_3 = 106). Tick the correct alternative.

(a) M/2 (B) M/10 (c) M/5 (d) M/50

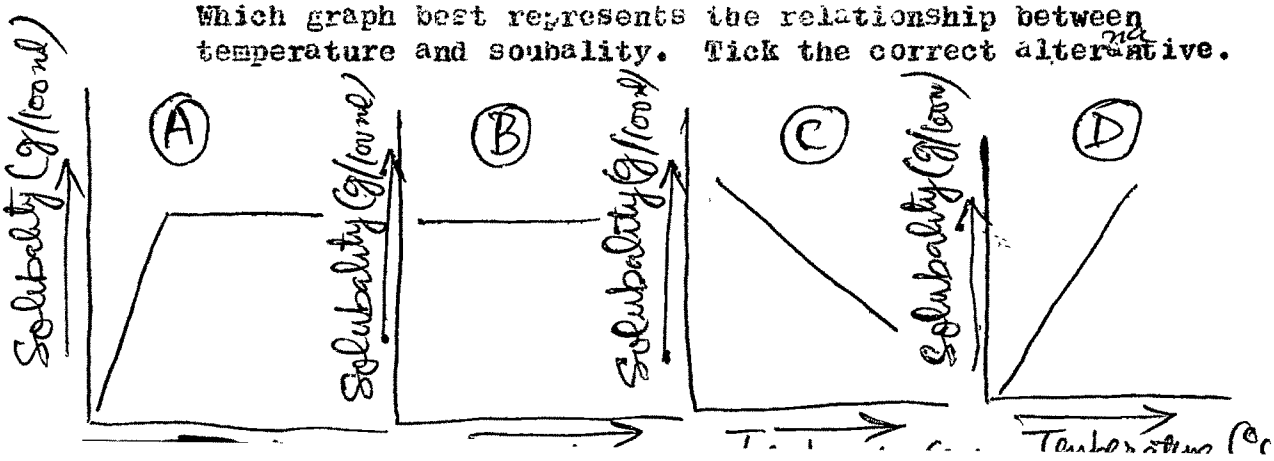
Q.25. 10 ml of M/20 HCL solution reacts with 7.5 ml of NaOH solution completely. The Molarity of NAOH solution is . Tick the correct alternative

(a) M/20 (b) M/10 (c) M/15 (d) M/5

Q.26. Examine the data below :

Temperature (C^0)	0	20	40	60	80	100
Solubality of Sugar in water g/100 ml.	170	290	230	280	360	480

Which graph best represents the relationship between temperature and soubality. Tick the correct alternative.



Q.27. Magnesium Ribben burns with dazzling light in a gas jar containing oxygen. Oxygen gas is , tick the correct alternative.

(a) Supporter of combustion.

(b) Combustible gas.

(c) Non supportner of combustion.

(d) Non-combustiblc gas.

Q.28. When a few ml of dilute sulphuric acid are added to a piece of zinc, there is. Tick the correct alternative.

(a) Absorption of heat

(b) Evolution of heat

(c) There is no change.

(d) None of the above.

Q.29. When a dilute solution of sulphuric acid is added to a dilute solution of Barium chaloride.A. change takes place. Tick the correct alternative.

(a) No change takes place

(b) There is absorption of heat.

(c) A white substance is formed which settles down at the bottom.

(d) None of the above.

Q.30. A blue litmus paper when dipped in a test tube full of solution, the blue limuts paper turns red. The solution, is, tick the correct alternative.

(a) An alkali (b) Water (c) A Salt solution
(d) An acid.

Q.31. While studying electrical conductivity of various solutions, the glowing of the bulb in the electrical circuit means that the solution is , Tick the correct alternative.

(a) An Electrolyte (b) A Non-electrolyte

(c) Pure water (d) None of the above.

Q.32. In qualitative analysis of a salt, original solution is prepared because , Tick the correct alternative.

(a) It is easier to test cations.

(b) It is difficult to test cations.

(c) It is the only way to test cations.

(d) None of the above.

Q.33. While precipitating IIIrd group radicals in qualitative analysis concentrated Nitric acid is added because , Tick the correct alternative.

(a) Ferrous ions are oxidised to Ferric ions.

(b) For the complete precipitation of $Fe(OH)_3$

(c) For oxidation of Ferrous ions and also for the complete precipitation of $Fe(OH)_3$

(d) None of the above.

Q.34. When Dimethyal - glyoxime is added to a freshly prepared solution of a Nickle Salt, the colour of the precipitate is . Tick the correct alternative.

(a) Yellow

(b) Blue

(c) Brown

(d) Floculant Red.

Q.35. The hydrogen sulphide gas from a salt solution can be removed by constant boiling until the vapours turn lead acetate paper , Tick the correct alternative.

(a) Black (b) Not Black (c) Yellow (d) Red.

Q.36. While analysing salt solution, if the solution becomes too acidic. The acidity can be removed by : Tick the correct alternative.

(a) By adding Ammonium hydroxide solution only.

(b) By adding more of acidic solution.

(c) By adding any alkaline solution.

(d) None of the above.

Q.37. While analysing a salt solution, if the solution becomes too alkaline. The alkalnity of the solution can be removed by : Tick the correct alternative.

(a) By adding any acidic solution.

(b) By adding gypsum ($CaSo_4.2H_2O$)

(c) By adding solid sodium carbonate.

(d) None of the above.

Q.38. While analysing a salt, flame test for a sodium salt, a colouration with naked eye : Tick thecorrect alternative.

(a) Persistant golden yellow.
(b) Crimson Red.
(c) Brick Red.
(d) Orange.

Q.39. While analysing a salt, charcoal cavity testfor a lead salt shows a coloured mettalic bead : Tick the correct alternative.

(a) Creyish white. (b) Shining white.
(c) Red Scales. (d) None of the above.

Q.40. While analysing a cobalt salt, Borax-Bead test for it shows colour in both the oxidising and reducting flame. Tick the correct alaternative.

(a) Dark green (b) Deep Blue (c) Reddish brown.
(d) Yellow

Q.41. The table ~~give on the next page sections~~ below mentions in two acidic solutions and alkaline solutions with their pH values Tick out the strongest acidic and the strongest alkaline solution. table

TABLE - A

S.No.	Acidic Solution	PH
1.	Solution A	2.3
2.	Solution B	4.3
3.	Solution C	6.7
4.	Solution D	1.8

TABLE - B

S.No.	Alkaline Solution.	PH
1.	Solution E	9.4
2.	Solution F	8.3
3.	Solution G	10.2
4.	Solution H	12.3

Q.42. An example of Chemical Equilibrium is given by the Chemical reaction.

$$Fe^{3+}(aq) + SCN^{-}(aq) \rightleftharpoons Fe\,SCN^{2+}_{(aq)}$$

If excess of SCN^{-} ions were added to the solution one would except : Tick the correct alternative

(a) The solution to become colourless.
(b) The solution to change to a precipitate
(c) The colour of the solution to remain unchanged.
(d) The colour of the solution to become yellow.