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Indian Army



MER

Nursing Assistant

Recruitment Exam

50 PRACTICE SETS



- Practice Sets designed as per Revised Syllabus & Exam Pattern
- Sectionwise Arrangement of Questions

Indian Army

MER
Nursing Assistant
Recruitment Exam

50 PRACTICE SETS

Author
Major RD Ahluwalia

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About Examination

Scheme of Written Examination

S.No.	Subject	Questions	Marks	Pass Marks
(a)	General Knowledge	10	40	
(b)	Physics	05	20	
(c)	Mathematics	05	20	80
(d)	Chemistry	15	60	
(e)	Biology	15	60	

SYLLABUS

(a) GENERAL KNOWLEDGE

The test will include questions relating to India and its neighbouring countries especially pertaining to History, Culture, Geography and who's who. In addition Abbreviations, Sports, Awards and Prizes, Terminology, Indian Armed Forces, Continents and Subcontinents, Inventions and Discoveries, The Constitution of India, International Organizations, Books and Authors, Knowledge of Important Events that have happened in India and at world level in the recent years, Current Important World Events, Prominent Personalities, etc.

(b) PHYSICS

Physical Properties and States of Matter, Mass, Weight, Volume, Density and Specific Gravity, Principle of Archimedes, Pressure Barometer, Motion of Objects, Velocity and Acceleration, Newtons Laws of Motion, Force and Momentum, Parallelogram of Forces, Stability and Equilibrium of bodies, Gravitation, Elementary Ideas of Work, Power and Energy, Heat and its Effects, Sound Waves and their Properties, Reflection and Refraction. Spherical Mirrors and Lenses, Type and Properties of Magnet, Static and Current Electricity, Conductors and Non-conductors, Ohms Law, Simple Electrical Circuits, Heating.

(c) MATHEMATICS

(i) Algebra
(ii) Matrices & Determinants
(iii) Analytical Geometry
(iv) Trigonometry
(v) Integral Calculus
(vi) Differential Calculus
(vii) Probability and Statistics
(viii) Number Systems
(ix) Fundamental Arithmetical Operations
(x) Mensuration
(xi) Area, Volume and Surface Area

(d) CHEMISTRY

Physical and Chemical Changes. Elements, Mixtures and Compounds, Symbols, Formulae and Simple Chemical Equations, Law of Chemical Combination, Properties of Air and Water, Preparation and Properties of Hydrogen, Oxygen, Nitrogen and Carbondioxide, Oxidation and Reduction, Acids, Bases and Salts, Carbon and its Forms, Natural and Artificial Fertilizers, Elementary ideas about the Structure of Atom, Atomic, Equivalent and Molecular Weights, Valency.

(e) BIOLOGY

Basic Biology, Life Process, Study of Birds, Human Beings, Uniqueness of Human Body, Food and Health, Necessity of Balanced Diet, Wasteful Food Practices, Food Yield, Essentials for Good Health, Cycles of materials, Ecological Balance, Living Resources, Habitat and Organisms, Adaptation.

Note The above syllabus is not a comprehensive list of topics pertaining to the subject. Questions are designed to test the candidate's general awareness of the environment around him and its application to society. Questions are also designed to test knowledge of current events and such matters of everyday observation and experience as may be expected of an educated person. At times questions may be asked other than the above topics, but definitely within the syllabus of CBSE.

Indian Army
MER Nursing Assistant

Practice Set 01

Instructions

- This paper consists of 50 Multiple Choice Questions divided in 5 Sections; **Section A** (General Knowledge), **Section B** (Mathematics), **Section C** (Physics), **Section D** (Biology) & **Section E** (Chemistry).
- Each question carries 4 marks, 1 mark will be deducted for every wrong answer.

Section A General Knowledge

1. The Keibul Lamjao National Park is located in
(a) Mizoram (b) Manipur
(c) Tripura (d) Assam

2. Who is awarded with Ramanujan Prize 2021?
(a) Deepak Dhar (b) Dr. Neena Gupta
(c) Ram Shastri (d) John Hopefield

3. Globally, December 1 is celebrated as the
(a) World Health Day
(b) World AIDS Day
(c) World Human Rights Day
(d) World Habitat Day

4. Jaintia tribe is inhabited in which state?
(a) Arunachal Pradesh (b) Mizoram
(c) Manipur (d) Meghalaya

5. The Southern Railway is headquartered at
(a) Hyderabad (b) Bangalore
(c) Secunderabad (d) Chennai

6. The first Speaker of Lok Sabha was
(a) KM Munshi (b) CD Deshmukh
(c) GV Mavalankar (d) HJ Kania

7. What is the State Bird of Union Territory of Ladakh?
(a) Black necked Crane (b) Kingfisher
(c) Great Hornbill (d) Monal

8. Which of the following planets is not a terrestrial planet?
(a) Mercury (b) Venus
(c) Earth (d) Saturn

9. Who is competent to dissolve the Parliament?
(a) Prime Minister (b) President
(c) Vice-President (d) Governor

10. Wankhede Stadium (Mumbai) is a famous ground for
(a) Football (b) Cricket
(c) Chess (d) Hockey

Section B Mathematics

11. If $\frac{\cos\theta}{1+\sin 90^\circ} = \frac{1}{4}$, then find the value of θ.
(a) 0° (b) 30°
(c) 45° (d) 60°

12. If $a + b - c = 0$, then find the value of $a^3 + b^3 - c^3 + 3abc$
(a) 1 (b) 3 (c) 0 (d) 2

13. The sides of a triangle have length 112 cm, 78 cm and 50 cm. Find its area.
(a) 1680 cm^2 (b) 1744 cm^2
(c) 1674 cm^2 (d) None of these

14. The derivative of the function $f(x) = 3x$ at $x = 2$ is
(a) 0 (b) 1 (c) 2 (d) 3

15. A man took loan from a bank at the rate of 12% p.a. simple interest. After 3yr he had to pay ₹ 5400 interest only for the period. The principal amount borrowed by him was
(a) ₹ 2000 (b) ₹ 10000
(c) ₹ 15000 (d) ₹ 20000

Section C Physics

16. Matter is found in the form of
(a) solid
(b) liquid
(c) solid, liquid and gas
(d) solid and liquid

17. The weight of a body at the centre of Earth is
(a) half the weight at the surface
(b) zero
(c) twice the weight at the surface
(d) infinite

18. A particle moves with a uniform velocity.
(a) The particle must be at rest.
(b) The particle moves along a curved path.
(c) The particle moves along a circle.
(d) The particle moves along a straight line.

19. A coin flicked across a table stops because
(a) no force acts on it
(b) it is very heavy
(c) the table exerts a frictional force on it
(d) the Earth attracts it

20. When a stone tied to a string is whirled in a circle, the work done on it by the string is
(a) positive (b) negative
(c) zero (d) undefined

Section D Biology

21. Who among the following is known as 'Father of Biology'?
(a) Darwin (b) Aristotle
(c) Haeckel (d) Edward Jenner

22. Scientific study of birds is known as
(a) Limnology (b) Herpetology
(c) Malacology (d) Ornithology

23. Bifocal lenses are used by people suffering from
(a) myopia and hypermetropia
(b) hypermetropia but not myopia
(c) myopia but not hypermetropia
(d) myopia or hypermetropia

24. Which one of the following tissues is responsible for increase of girth in the stem of a plant?
(a) Tracheid
(b) Pericycle
(c) Intercalary meristem
(d) Lateral meristem

25. Kwashiorkor disease in children is caused by
(a) sufficient carbohydrates, but less fats in diet
(b) sufficient carbohydrates and fats, but deficient proteins in diet
(c) sufficient vitamins, but deficient fats in diet
(d) sufficient fats, but deficient vitamins in diet

26. The exhaustibal natural resource is
(a) coal
(b) solar energy
(c) wind energy
(d) hydrothermal energy

27. ..... are called the amphibians of the plant kingdom.
(a) Pteridophytes (b) Angiosperms
(c) Bryophytes (d) Thallophytes

28. The normal blood pressure of human beings is in one of the following ranges
(a) 140/80 mm (b) 110/70 mm
(c) 120/80 mm (d) 110/75 mm

29. Which one of the following is a marine fish?
(a) Rohu (b) Hilsa
(c) *Catla* (d) Common carp

30. Which protein-sugar pair is present in milk?
(a) Casein, sucrose (b) Casein, lactose
(c) Ferritin, maltose (d) Albumin, glucose

31. Stomata are sunken types in
(a) mesophytes (b) xerophytes
(c) hygrophytes (d) hydrophytes

32. Which one of the following is not an essential micro-nutrient for plants?
(a) Boron (b) Potassium
(c) Sodium (d) Magnesium

33. Human heart has
(a) four chambers
(b) three chambers
(c) two chambers
(d) five chambers

34. Which of the following parts of a flower is not a reproductive organ?
(a) Stigma (b) Style
(c) Anther (d) Sepal

35. Structural and functional unit of the kidney is
(a) medulla (b) nephridia
(c) nephron (d) hilum

Section E Chemistry

36. Which of the following is a solid?
(a) Chloroform (b) Iodoform
(c) Ethyl alcohol (d) Ether

37. Which among the following has lowest electron affinity?
(a) Fluorine (b) Chlorine
(c) Bromine (d) Argon

38. The buffer action of blood is due to the presence of
(a) HCl and NaCl (b) Cl^- and CO_3^{2-}
(c) Cl^- and HCO_3^- (d) HCO_3^- and H_2CO_3

39. Which of the following will have maximum mass?
(a) 0.1 mole of NH_3
(b) 1 g of iron
(c) 1022 molecules of CO_2
(d) 0.01 mol of H_2O

40. The discovery of neutron became very late because
(a) it is present in nucleus
(b) it is not fundamental particle
(c) it does not move
(d) it does not carry any charge

41. Which among the following is true for formation of gas bubble?
(a) It is a chemical change
(b) It is a physical change
(c) It is a chemical property
(d) It is a physical property

42. How many elements are there in the 5th period of modern periodic table?
(a) 2 (b) 8
(c) 18 (d) 36

43. Which of the following reacts with water at a high rate?
(a) Li (b) K
(c) Na (d) Rb

44. Which one of the following reducing agents can also act as an oxidising agent?
(a) H_2 (b) H_2S
(c) SO_2 (d) HI

45. Which are the materials generally employed as solder in soldering operation in electronics?
(a) Iron and tin
(b) Lead and tin
(c) Alumnium and lead
(d) Aluminium and iron

46. The component which is present in highest proportion in water gas is
(a) CO_2 (b) CH_4
(c) H_2 (d) steam

47. Which one of the following does not contain silver?
(a) Horn silver (b) German silver
(c) Ruby silver (d) Lunar caustic

48. Sulphide ores are common for the metals
(a) Ag, Cu and Pb
(b) Ag, Cu and Sn
(c) Ag, Mg and Pb
(d) Al, Cu and Pb

49. Richest source of nitrogen is
(a) dried blood (b) raw bone meal
(c) fish manure (d) dry activated sludge

50. Which among the following is true for formation of gas bubble?
(a) It is a chemical change.
(b) It is a physical change.
(c) It is a chemical property.
(d) It is a physical property.

Answer Sheet

1 (b)	**2** (b)	**3** (b)	**4** (d)	**5** (d)	**6** (c)	**7** (a)	**8** (d)	**9** (b)	**10** (b)
11 (d)	**12** (c)	**13** (a)	**14** (d)	**15** (c)	**16** (c)	**17** (b)	**18** (d)	**19** (c)	**20** (c)
21 (b)	**22** (d)	**23** (a)	**24** (d)	**25** (b)	**26** (a)	**27** (c)	**28** (c)	**29** (b)	**30** (b)
31 (b)	**32** (c)	**33** (a)	**34** (d)	**35** (c)	**36** (b)	**37** (d)	**38** (d)	**39** (a)	**40** (d)
41 (a)	**42** (c)	**43** (d)	**44** (c)	**45** (b)	**46** (c)	**47** (b)	**48** (a)	**49** (a)	**50** (a)

Hints & Solutions

11. ***(d)*** Given,

$$\frac{\cos\theta}{1+\sin 90^\circ}=\frac{1}{4}$$

$$\Rightarrow \quad \frac{\cos\theta}{1+1}=\frac{1}{4} \qquad [\because \sin 90^\circ = 1]$$

$$\Rightarrow \quad \cos\theta=\frac{2}{4}=\frac{1}{2}=\cos 60^\circ$$

$$\therefore \quad \theta = 60^\circ$$

12. ***(c)*** Given, $a + b - c = 0$

$$\Rightarrow \quad a + b = c \qquad \ldots(i)$$

On cubing both sides,

$$\Rightarrow \quad a^3 + b^3 + 3ab(a + b) = c^3$$

$$\Rightarrow \quad a^3 + b^3 + 3abc = c^3 \qquad [\text{from Eq. (i)}]$$

$$\therefore \quad a^3 + b^3 - c^3 + 3abc = 0$$

13. ***(a)*** Let $a = 112$ cm, $b = 78$ cm and $c = 50$ cm

We know that,

$$s=\frac{a+b+c}{2}$$

$$=\frac{112+78+50}{2}$$

$$=\frac{240}{2}=120$$

$\therefore$ Area of triangle

$$=\sqrt{s(s-a)(s-b)(s-c)}$$

$$=\sqrt{120(120-112)(120-78)(120-50)}$$

$$=\sqrt{120\times 8\times 42\times 70}$$

$$=\sqrt{2822400}$$

$$=1680\,\text{cm}^2$$

14. ***(d)*** We have,

$$f(x) = 3x$$

$$\Rightarrow \quad f'(x) = 3$$

$$\therefore \quad f'(2) = 3$$

15. ***(c)*** Let amount of loan = ₹x

$$\text{SI}=\frac{\text{Principal amount}\times\text{Rate}\times\text{Time}}{100}$$

$$5400=\frac{x\times 12\times 3}{100}$$

$$\therefore \quad x=\frac{5400\times 100}{36}$$

$$=₹15000$$

Indian Army
MER Nursing Assistant

Practice Set 02

Instructions

- This paper consists of 50 Multiple Choice Questions divided in 5 Sections; **Section A** (General Knowledge), **Section B** (Mathematics), **Section C** (Physics), **Section D** (Biology) & **Section E** (Chemistry).
- Each question carries 4 marks, 1 mark will be deducted for every wrong answer.

Section A General Knowledge

1. 'Manas Tiger Sanctuary' is located in
(a) Rajasthan (b) Assam
(c) Madhya Pradesh (d) Uttar Pradesh

2. Which of the following is not an exclusive part of Parliament?
(a) Vice-President (b) President
(c) Lok Sabha (d) Rajya Sabha

3. Who is/are honoured with Nobel Prize in Medicine 2021?
(a) David Julius
(b) Ardem Patapoutian
(c) Both (a) and (b)
(d) Maria Ressa

4. Which is India's first large state to record 100% first-dose vaccinations?
(a) Telangana (b) Odisha
(c) Tamil Nadu (d) Karnataka

5. India's first atomic power station was set up at
(a) Surat (Gujarat)
(b) Tarapur (Maharashtra)
(c) Trombay (Maharashtra)
(d) Solapur (Maharashtra)

6. Who took over as the 27th chief of the Indian Air Force?
(a) RKS Bhadauria
(b) MM Naravane
(c) VR Chaudhary
(d) Karambir Singh

7. Which Five Year Plan was also known as 'Gadgil Yojana'?
(a) Fifth (b) Fourth
(c) Third (d) Second

8. 'National Protein Day' is annually observed in India on
(a) March 26 (b) February 27
(c) February 28 (d) March 8

9. A book titled 'The Blue Book' is authored by
(a) Deepam Chatterjee
(b) Piyush Goyal
(c) Amitava Kumar
(d) Ken Ghosh

10. Which day is celebrated as International Women's Day?
(a) January 12 (b) January 25
(c) February 14 (d) March 8

Section B Mathematics

11. In a school parade, the ratio of the number of boys and girls is 9 : 7 and the total number of boys and girls is 256. Find the number of girls.
(a) 102 (b) 112
(c) 118 (d) 128

12. If the volume of a cube is 2197 cm^3, what will be the surface area of the cube?
(a) 1020 cm^2 (b) 1014 cm^2
(c) 1016 cm^2 (d) 1024 cm^2

13. If median = 137, mean = 137.05, then the value of mode is
(a) 156.90 (b) 136.90
(c) 186.90 (d) 206.90

14. D and E are points on side AB and AC of ΔABC. DE is parallel to BC. If $AD : DB = 2 : 3$, what is the ratio of area of ΔADE and area of quadrilateral $BDEC$?
(a) 4 : 21 (b) 4 : 25 (c) 4 : 29 (d) 4 : 9

15. The average salary of workers of a factory is ₹ 6000. The average salary of 15 technicians is ₹ 12000 and that of non-technicians is ₹ 3750. Find the total number of workers in the factory.
(a) 40 (b) 25
(c) 35 (d) None of these

Section C Physics

16. The momentum of a body of given mass is proportional to its
(a) volume (b) shape
(c) speed (d) colour

17. Two bodies of unequal masses are dropped from a cliff. At any instant, they have equal
(a) momentum (b) acceleration
(c) potential energy (d) kinetic energy

18. Which of the following phenomena is involved in kaleidoscope?
(a) Refraction
(b) Reflection
(c) Total Internal Reflection (TIR)
(d) Diffraction

19. Magnetic keepers are used to protect magnets from
(a) Earth's magnetic field
(b) effect of other magnets
(c) self-demagnetisation
(d) demagnetisation due to heating

20. Which of the following is the insulator?
(a) Silver (b) Copper (c) Gold (d) Wood

Section D Biology

21. Cross pollination through insect agent is called
(a) Anthropophily (b) Malacophily
(c) Entomophily (d) Ornithophily

22. Memory is the responsibility of
(a) grey matter (b) white matter
(c) cerebrum (d) cerebellum

23. Nematocysts are present in
(a) starfish (b) *Ascaris*
(c) centipede (d) sea anemone

24. Which of the following statements is correct?
(a) Pulses contains 80% carbohydrates.
(b) Rice contains 90% carbohydrates and 8-10% proteins.
(c) Rice contains 60% carbohydrates and 35-40% proteins.
(d) Rice contains 70% carbohydrates and 25-30% proteins.

25. The master control centre of the human body in
(a) brain (b) heart (c) stomach (d) liver

26. In ocean, where is 'Benthos' found?
(a) At bottom of ocean
(b) At upper surface of ocean
(c) In an enclosed area of ocean
(d) Along the shore

27. In human body, percentage of which element is highest?
(a) Hydrogen (b) Nitrogen
(c) Carbon (d) Oxygen

28. Largest organelle of an eukaryotic cell is
(a) nucleus (b) chloroplast
(c) ribosomes (d) mitochondria

29. Which of the following is a vestigial organ in human?
(a) Heart (b) Kidney
(c) Lungs (d) Appendix

30. Which among the following can be termed as a 'dynamic living entity'?
(a) Tree (b) Water (c) Forest (d) Air

31. Term vitamin was first given by
(a) Funk (b) Leeuwenhoek
(c) C. Benda (d) Altmann

32. Name the enzyme that is present in human saliva.
(a) Pepsin (b) Trypsin
(c) Ptyline (d) Chymotrypsin

33. Which one among the following cattle breed produces highest amount of milk?
(a) Brown Swiss (b) Holstein
(c) Dutch Belted (d) Blaarkop

34. Kiwi is found in
(a) Sikkim (b) Himachal Pradesh
(c) New Zealand (d) Bangladesh

35. Which of the following is not a multicellular organism?
(a) Fungi (b) *Spirogyra*
(c) *Hydra* (d) *Paramecium*

Section E Chemistry

36. In a compound, the elements are always present in definite proportions by
(a) mass (b) volume
(c) size (d) density

37. The ability of an atom in a chemical compound to attract shared electron is termed as
(a) Electron affinity
(b) Ionisation enthalpy
(c) Atomic attraction
(d) Electronegativity

38. Which of the following is not true for a chemical change?
(a) It is an irreversible process.
(b) No new substance is formed.
(c) Formation of new substance takes place.
(d) Change of states may occur.

39. What is the formula mass of anhydrous sodium carbonate?
(Given, that the atomic masses of sodium, carbon and oxygen are 23u, 12u and 16u, respectively).
(a) 286 u (b) 106 u
(c) 83 u (d) 53 u

40. Which of the following has the almost entire mass of the atom?
(a) Proton (b) Neutron
(c) Nucleus (d) Electron

41. On the labels of the bottles, some soft drinks are claimed to be acidity regulators. They regulate acidity using
(a) carbon dioxide
(b) bicarbonate salts
(c) Both (a) and (b)
(d) carbon dioxide and lime

42. Bleaching action of chlorine is due to which reaction?
(a) Oxidation (b) Hydrolysis
(c) Redox (d) Decomposition

43. Which metal is generally used for coating of brass utensils to prevent copper contamination?
(a) Tin (b) Zinc
(c) Aluminium (d) Lead

44. All the elements in a group in the periodic table have the same
(a) atomic weight.
(b) number of valence electrons
(c) atomic number
(d) None of the above

45. Which of the following metals is the most reactive metal?
(a) Copper (b) Calcium
(c) Iron (d) Zinc

46. A gas X is used in filling balloons for meterological observations. It is also used in gas-cooled nuclear reactors. Identify X.
(a) Helium (b) Neon
(c) Argon (d) Krypton

47. Which one of the following is the purest form of carbon?
(a) Charcoal (b) Coke
(c) Fullerene (d) Carbon black

48. Combination of one volume of nitrogen with three volumes of hydrogen produces
(a) one volume of ammonia
(b) two volumes of ammonia
(c) three volumes of ammonia
(d) one and a half volumes of ammonia

49. Which of the following is not an ore of iron?
(a) Cuprite (b) Haematite
(c) Magnetite (d) Siderite

50. The most conspicuous chemical change that take place when soil is flooded is reduction of
(a) Fe (b) P
(c) S (d) None of these

Answer Sheet

1 (b)	**2** (a)	**3** (c)	**4** (a)	**5** (b)	**6** (c)	**7** (c)	**8** (b)	**9** (c)	**10** (d)
11 (b)	**12** (b)	**13** (b)	**14** (a)	**15** (d)	**16** (c)	**17** (b)	**18** (b)	**19** (d)	**20** (d)
21 (c)	**22** (c)	**23** (d)	**24** (b)	**25** (a)	**26** (a)	**27** (d)	**28** (a)	**29** (d)	**30** (c)
31 (a)	**32** (c)	**33** (b)	**34** (c)	**35** (d)	**36** (a)	**37** (d)	**38** (b)	**39** (b)	**40** (c)
41 (b)	**42** (a)	**43** (a)	**44** (b)	**45** (b)	**46** (a)	**47** (d)	**48** (b)	**49** (a)	**50** (a)

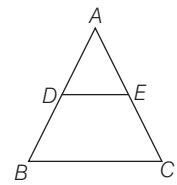
Hints & Solutions

11. ***(b)*** Let the number of boys and girls are $9x$ and $7x$ respectively.
According to the question,
$9x + 7x = 256$
$\Rightarrow \quad 16x = 256$
$\Rightarrow \quad x = 16$
$\therefore$ Number of girls
$= 7x = 7 \times 16 = 112$

12. ***(b)*** Given, volume of cube
$= 2197\,\text{cm}^3$
$\Rightarrow a^3 = 2197$ [$\because a$ is side of cube]
$\Rightarrow \ a = 13\,\text{cm}$
$\therefore$ Surface area of cube
$= 6a^2 = 6 \times (13)^2$
$= 6 \times 169 = 1014\,\text{cm}^2$

13. ***(b)*** We know that,
Mode = 3 Median -2 Mean
$= 3 \times 137 - 2 \times 137.05$
$= 411 - 274.1 = 136.9$

14. ***(a)*** Given, $DE \parallel BC$
and $AD : DB = 2 : 3$
Now, In ΔADE and ΔABC
$\angle A =$ Common
$\angle ADE = \angle ABC$
and $\angle AED = \angle ACB$
So, $\Delta ADE \sim \Delta ABC$
[By AAA similarly]



Then, $\dfrac{\text{ar }\Delta\text{ADE}}{\text{ar }(\Delta ABC)} = \dfrac{AD^2}{AB^2}$

$\Rightarrow \quad \dfrac{\text{ar }(\Delta ADE)}{\text{ar }(\Delta ABC)} = \dfrac{4}{25}$

$\therefore \dfrac{\text{ar}(\Delta ADE)}{\text{ar}(\Delta ECB)} = \text{ar}\dfrac{(\Delta ADE)}{(\Delta ABC) - \text{ar}(\Delta ADE)}$

$= \dfrac{4}{25 - 4}$

$= \dfrac{4}{21} = 4 : 21$

15. ***(d)*** Let there are x non-technicians in the factory.
According to the question,
$(15 \times 12000 + x \times 3750)$
$= (15 + x) \times 6000$
$\left[\because \text{Average} = \dfrac{\text{Sum of numbers}}{\text{Total number}}\right]$
$\Rightarrow \ 180000 + 3750x$
$= 90000 + 6000x$
$\Rightarrow \quad 2250x = 90000$
$\Rightarrow \quad x = 40$
$\therefore$Total number of workers in the factory $= 15 + x$
$= 15 + 40$
$= 55$