DO NOT BREAK THE SEAL OF THE BOOKLET UNTIL YOU ARE TOLD TO DO SO

QUESTION BOOKLET

SERIES II

Subject : General English & Physics (ICSE Syllabus)

BOOKLET SERIAL NO. 0018

Marks : 300

Time : 3 (three) hours

Read the following instructions carefully before you begin to answer the questions.

INSTRUCTIONS TO CANDIDATES

1. This booklet contains **150 questions** to be answered in a separate OMR Answer Sheet using Black Ball Pen in following three parts.

   Part-A-General English : 50 questions & Part-B- Physics(ICSE Syllabus) : 100 questions

2. All Questions are compulsory.
3. You will be supplied the Answer sheet separately by the invigilator. You must complete the details of particulars asked for.
4. Answers must be shown by completely blackening the corresponding circles in the Answer Sheet against the relevant question number by Black Ball Pen. OMR Answer Sheet without marking series/ double series marking shall not be evaluated.

Example :

Supposing the following question is asked :-

The Capital of Meghalaya is-

A. Guwahati
B. Kohima
C. Shillong
D. Delhi

You will have four alternatives in the Answer Sheet for your response corresponding to each question of the Question Booklet as below :-

Ⓐ Ⓑ Ⓒ Ⓓ

In the above illustration, if your chosen response is alternative C i.e. Shillong, then the same should be marked on the Answer Sheet by blackening the relevant circle with a Black Ball Point Pen only as below :-

Ⓐ Ⓑ ● Ⓓ

WHICH IS THE ONLY CORRECT METHOD OF ANSWERING :

5. Answer the questions as quickly and as carefully as you can. Some questions may be difficult and others easy. Do not spend too much time on any one question.
6. There will NOT be any negative marking for wrong answers.
7. The Answer Sheet must be handed over to the invigilator before you leave the Examination Hall.
8. No rough work is to be done on the Answer Sheet. Space for rough work has been provided in the question booklet.

PART - A - GENERAL ENGLISH

Marks : 100

Each Question carries 2 marks:

Substitute one word for the underlined words by choosing the correct options provided below :

1. John and Prakash are working in the same office .
a) friends b) partners
c) colleagues d) cousins

2. Selling liquor in public places is against the law .
a) illicit b) illegal
c) illegible d) illusory

3. Asha is a person who always looks at the dark side of things .
a) optimist b) pessimist
c) philatelist d) idealist

4. John repaid the money he borrowed in a period of ten years .
a) decimal b) decade
c) deadlock d) dilemma

5. Death is something that no one can escape.
a) inevitable b) intuitive
c) infallible d) incorrigible

Choose the word which is similar in meaning as the word given in capital letters :

6. ABANDON
a) care b) leave
c) persuade d) worship

7. CONDONE
a) pardon b) punish
c) praise d) prohibit

8. LETHARGY
a) deadly b) laziness
c) notorious d) cruel

9. RIDICULOUS
a) silly b) charming
c) exciting d) sickly

10. VINDICTIVE
a) energetic b) revengeful
c) brisk d) clever

Add appropriate question tags to the following sentences by choosing from the given options :

11. She can sing very well
a) can she ? b) can't she ?
c) couldn't she ? d) isn't it ?

12. You have seen her
a) haven't you ? b) isn't it ?
c) didn't you ? d) have you ?

13. We have not met before
a) haven't we ? b) did we ?
c) didn't we ? d) have we ?

14. Mary is senior to you
a) is she ? b) can't she ?
c) aren't she ? d) isn't she ?

15. Open the window
a) don't you ? b) won't you ?
c) will you ? d) should you ?

Choose the appropriate meaning to the phrase / idiom given :

16. **The rank and file**
a) common people b) criminals
c) outsiders d) religious group

17. **At sixes and sevens**
a) in disorder b) counting numbers
c) to quarrel d) to harm others

18. **Bag and baggage**
a) with all belongings b) to run away

c) to move away d) to throw things

19. **Foot the bill**
a) to kick somebody b) bear expenses
c) to earn money d) to obey orders

20. **In the dark**
a) to be unaware b) to work at night
c) to sleep late d) to do ill

21. **Now and then**
a) often b) occasionally
c) never d) all the time

22. **A stone's throw**
a) very near b) worthless
c) very distant d) on both sides

23. **Child's play**
a) a very easy thing b) an immature person
c) quick return d) disobedient

24. **Through fire and water**
a) through any difficulty b) to get burnt
c) to fight d) to desert

25. **Cry wolf**
a) chased by a wolf b) to raise a false alarm
c) to suffer d) to confess

Choose the word which is opposite in meaning as the word given in capital letters :

26. OPAQUE
a) vague b) firm
c) transparent d) poor

27. FRUGAL
a) extravagant b) generous
c) happy d) poor

28. CONCISE
a) wrong b) precise
c) smooth d) lengthy

29. CURTAIL
a) close b) shorten
c) lengthen d) entail

30. INFERIOR
a) shame b) senior
c) superior d) narrow

From among the four options given under each sentence, find the one that fits into the blank space most appropriately :

31. The committee's appeal to the people for money _____ little response.
a) provoked b) evoked
c) gained d) provided

32. An _____ man is sure to be successful.
a) indiscreet b) industrial
c) industrious d) inductive

33. This building is so old that it is not _____ any longer.
a) habitation b) habitat
c) habitant d) habitable

34. Health is too important to be _____
a) neglected b) discarded
c) despised d) detested

35. Like any other country, India has its _____ share of superstitions.
a) abundant b) fair
c) proper d) peculiar

Choose the appropriate preposition given below :

36. The four brothers always quarreled _____ themselves.
a) to b) between
c) for d) among

37. He was fined _____ driving recklessly.
a) to b) of
c) by d) for

38. The bridge _____ this river was built in the year 1995.
a) at b) over
c) above d) on

39. His father died _____ the age of seventy.
a) at b) in
c) for d) of

40. We saw a wounded tiger while passing _____ the forest.
a) from b) through
c) along d) among

Fill in the blanks :

41. My father _____ speak five languages.
a) can b) may
c) could d) would

42. _____ you do me a favour ?
a) can b) will
c) would d) shall

43. Had you worked hard, you _____ have passed the examination.
a) should b) would
c) could d) might

44. John tried to solve the problem but he _____ not.
a) would b) could
c) might d) should

45. You _____ go home whenever you like.
a) may b) can
c) will d) shall

Fill in the blanks choosing the appropriate word / words from the options given below:

46. I _____ him a week ago.
a) seen b) saw
c) see d) sees

47. I _____ to Mumbai recently.
a) go b) had gone
c) went d) had went

48. He often comes _____ to the class.
a) lately b) later
c) late d) latter

49. He was badly wounded and _____ profusely.
a) bled b) bleed
c) bleeding d) bleeded

50. Either you or Mary _____ to take the lead in this matter.
a) has b) have
c) had d) shall

PART - B - Physics (ICSE Syllabus)

Marks : 200

Each Question carries 2 marks:

51. The S.I. unit of angle is
a) kelvin b) candela
c) radian d) steradian

52. $1\overset{0}{A}$ is equal to
a) 0.1 nm b) 10^{-10} cm
c) 10^{-8} m d) 10^{10} m

53. When taking a reading with a vernier calliper, the
a) observed reading = main scale reading x (vernier constant + vernier reading)
b) observed reading = main scale reading + (vernier constant x vernier reading)
c) observed reading = main scale reading ÷ (vernier constant + vernier reading)
d) observed reading = main scale reading - (vernier constant x vernier reading)

54. Which of the following is a vector quantity?
a) time b) speed
c) pressure d) weight

55. For a uniformly retarded motion, the velocity-time graph is
a) a curve
b) a straight line parallel to time axis
c) a straight line perpendicular to time axis
d) a straight line inclined to time axis

56. A body starts from rest with a uniform acceleration 2m s^{-2}. The distance covered by the body in 2 s will be
a) 4m b) 4cm
c) 2m d) 2cm

57. If a body is thrown vertically upwards, which of the following equation is true ?
a) $v^2 = u^2 - 2gh$ b) $v = u + at$
c) $v = gt$ d) $S = ut + \frac{1}{2}gt^2$

58. The property of inertia is largest in a
a) tennis ball b) cricket ball
c) bowling ball d) football

59. The correct form of Newton's second law is
a) $F = \frac{\Delta v}{\Delta t}$ b) $F = v\frac{\Delta m}{\Delta t}$
c) $F = \frac{\Delta p}{\Delta t}$ d) $F = \tilde{m}v$

60. A car of mass 480 kg moving at a speed of 15 m / s, is stopped in 10s. The magnitude of the force apply by the brakes is
a) 720 N b) 7200 N
c) 32 N d) 495 N

61. Which law illustrates the firing of a bullet from a gun ?
a) Newton's first law of motion
b) Newton's third law of motion
c) Newton's second law of motion
d) Universal law of Gravitation

62. "pascal" , the S.I. unit of pressure is equal to
a) N cm^2 b) Pa
c) N m^2 d) N m^{-2}

63. The normal atmospheric pressure is
a) 76 m of Hg b) 76 cm of Hg
c) 76 Pa d) 76 N m^{-2}

64. The pressure of water on the ground floor is 40,000 Pa and on the first floor is 10,000 Pa. Given that the density of water = 1000 kg m^{-3} and the acceleration due to gravity = 10 m s^{-2}. The height of the first floor is
a) 300 m b) 10 m
c) 4 m d) 3 m

65. The upthrust experienced by a body immersed in a liquid is equal to
a) the weight of the body itself

b) the volume of liquid displaced by the body
c) the weight of liquid displace by the body
d) the volume of the body itself

66. A body of density p sinks in a liquid of density p_L. The densities p and p_L are related as

a) $p > p_L$ b) $p = p_L$

c) $p < p_L$ d) $p\, p_L = 1$

67. The unit of relative density is
a) $g\ cm^{-3}$ b) $kg\ m^{-3}$

c) $m^3 kg^{-1}$ d) no unit

68. A body of weight W is floating in a liquid. Its apparent weight will be
a) zero b) equal to W
c) less than W d) greater than W

69. The relation between the coefficients of linear expansion (α), superficial expansion (β) and cubical expansion (γ) is

a) $\alpha : \beta : \gamma = 2 : 1 : 3$

b) $\alpha : \beta : \gamma = 1 : 2 : 3$

c) $\alpha : \beta : \gamma = 3 : 1 : 2$

d) $\alpha : \beta : \gamma = 3 : 2 : 1$

70. The increase in length of a rod on heating depends on
a) its initial length
b) its material
c) its rise in temperature
d) all of the above

71. Density of water is maximum at
a) 0^0 C b) 100^0 C
c) 4^0 C d) 10^0 C

72. On Fahrenheit scale, the boiling point of water is
a) 100^0 F b) 80^0 F
c) 212^0 F d) 32^0 F

73. Heat radiations travel with a speed
a) less than the speed of light
b) greater than the speed of light
c) equal to the speed of light
d) equal to the speed of sound

74. A medium is required for the transfer of heat by the process of
a) conduction and convection
b) radiation and conduction
c) convection and radiation
d) conduction only

75. In convection, heat is transfered
a) downwards b) upwards
c) sideways d) in all directions

76. The green house gas is
a) oxygen b) nitrogen
c) chlorine d) carbon-dioxide

77. The principal focus of a convex mirror lies
a) above the principal axis
b) in front of the mirror
c) below the principal axis
d) behind the mirror

78. The image formed by a plane mirror is
a) virtual with lateral inversion
b) real
c) virtual
d) real with lateral inversion

79. When an object is placed in between two parallel mirrors, the number of images formed is
a) 5 b) infinite
c) 0 d) 100

80. If the radius of curvature of a concave mirror is 24 cm, then its focal length will be
a) 24 cm b) 48 cm
c) 12 cm d) 6 cm

81. At what distance from a concave mirror of

focal length 25 cm should an object be placed so that the size of the image is equal to the size of the object ?

a) 10 cm b) 25 cm
c) 15 cm d) 50 cm

82. Which of the following is correct ?
a) wave velocity = frequency + wavelength
b) wave velocity = frequency x wavelength
c) frequency = wave velocity x wavelength
d) wavelength = frequency x wave velocity

83. Where should an object be placed so that the concave mirror forms a virtual and erect image ?
a) at the centre of curvature
b) between centre of curvature and focus
c) between the focus and pole of the mirror
d) at the focus

84. The heart of a man beats 75 times a minute. Its frequency is
a) 1.75 s^{-1} b) 1.0 s^{-1}
c) 0.75 s^{-1} d) 2.75 s^{-1}

85. Two uncharged bodies on rubbing, get charged because of
a) friction b) conduction
c) induction d) convection

86. A glass rod rub with silk is brought near the disc of a negatively charged gold leaf electroscope. The divergence of its leaves will
a) decrease b) increase
c) remain unchanged d) nothing can be said

87. A lightning conductor is made up of
a) glass b) ebonite
c) copper d) wood

88. Which of the following is an insulator ?
a) gold b) human body
c) silk d) acidulated water

89. A current of 1.5 A flows through a cross section of a conductor in 4s. The amount of charge passes through the conductor is
a) 3 C b) 6 C
c) 9 C d) 4.5 C

90. How is the resistance of a wire affected if its radius is doubled ?
a) becomes twice
b) remains same
c) becomes halved
d) becomes one-fourth

91. The unit of potential difference is
a) ampere b) volt
c) ohm d) coulomb

92. The amount of work done that is needed in moving 2 C charge through a potential difference of 8 V is
a) 16 J b) 4 J
c) 0.25 J d) 32 J

93. Two like magnetic poles
a) first attract each other, then repel
b) attract each other
c) repel each other
d) neither attract nor repel

94. In a uniform magnetic field, the field lines are
a) curved
b) parallel equidistant straight lines
c) parallel but non-equispaced straight lines
d) nothing can be said

95. The attractive property of a magnet is maximum at
a) north pole only
b) south pole only
c) mid-point of magnet
d) north and south poles both

96. At a neutral point, the resultant magnetic field is
a) maximum b) along N - S
c) zero d) along E - W

97. The distance between two consecutive crests in a transverse wave is 100 m. If the wave velocity is 20 m /s, the frequency of the wave is

a) 5 Hz b) 0.2 Hz
c) 2000 Hz d) 2 Hz

98. Sonar makes use of
a) sound waves b) infrasonic waves
c) ultrasonic waves d) light waves

99. The frequency range of human ear is
a) 10 Hz - 100 kHz b) 80 Hz - 60 kHz
c) 200 Hz - 150 kHz d) 20 Hz - 20 kHz

100. Which of the following amount of charge is possible ?
a) 2.4×10^{-19} C b) 1.44×10^{-19} C
c) 1.92×10^{-19} C d) 3.2×10^{-19} C

101. How much acceleration will be produced in a body of mass 10 kg acted upon by a force of 2 kgf ?
a) 1.96 m/s^2 b) 2 m/s^2
c) 5 m/s^2 d) 2.5 m/s^2

102. The unit of moment is
a) N m b) N
c) $\frac{N}{m}$ d) kg m^2/s

103. The appliance which works on the principle of moments is
a) spring balance b) beam balance
c) pendulum clock d) balance wheel

104. The centre of gravity of a uniform ball is at
a) its bottom
b) its centre
c) its topmost point
d) any point on surface

105. Which of the following quantity remains constant in a uniform circular motion ?
a) velocity b) acceleration
c) speed d) force

106. One electron volt (1eV) is equal to
a) 1.9×10^{19} J b) 1.9×10^{-19} J
c) 1.6×10^{-19} J d) 1.6×10^{19} J

107. A body falls freely under gravity from rest. The kind of energy the body will possess while falling will be
a) potential energy
b) kinetic energy
c) kinetic energy and potential energy
d) no energy

108. A pendulum is oscillating on either side of its rest position. The correct statement is
a) It has only the kinetic energy.
b) It has the maximum kinetic energy at its extreme position.
c) It has the maximum potential energy at its rest position.
d) The sum of its kinetic and potential energies remains constant throughout the motion.

109. The correct relationship between the mechanical advantage (M.A.), the velocity ratio (V.R.) and the efficiency (η) is
a) M.A. = η x V.R.

b) V.R. = η x M.A.

c) η = M.A. x V.R.

d) M.A. x V.R. x η = 1

110. The mechanical advantage of an inclined plane is always
a) less than 1 b) greater than 1
c) equal to 1 d) equal to 0

111. Which of the following factor does not affect the value of lateral displacement ?
a) the thickness of glass block
b) the angle of incidence
c) the wavelength of light used
d) speed of light

112. A movable pulley is used as
a) force multiplier
b) speed multiplier
c) device to change the direction of effort
d) all of the above

113. For which colour of white light, is the

refractive index of a transparent medium the least ?

a) green b) violet
c) red d) yellow

114. How much is the refractive index of the liquid when the apparent depth of a liquid in a vessel is 15 cm, when its real depth is 20 cm ?

a) 1 b) 1.33
c) 1.5 d) 1.55

115. The critical angle for glass-air surface is

a) 42^0 b) 24^0
c) 48^0 d) 45^0

116. The deviation produced by an equilateral prism, when a ray of light is incident on it, does not depend on

a) angle of prism b) colour of light
c) material of prism d) size of prism

117. A ray of light directed towards the optical centre of a lens, after refraction

a) passes through the focus
b) becomes parallel to the principal axis
c) passes undeviated
d) is reflected back

118. Where should an object be placed infront of a convex lens so that it forms an image at infinity ?

a) at infinity b) beyond $2F_1$
c) at $2F_1$ d) at F_1

119. For an object placed at a distance 20 cm infront of a convex lens, the image is at a distance 20 cm behind the lens. The focal length of convex lens is

a) 20 cm b) 10 cm
c) 15 cm d) 40 cm

120. A magnifying glass form a

a) virtual and magnified image
b) real and diminished image
c) real and magnified image
d) virtual and diminished image

121. When a white light ray falls on a prism, the ray at its first surface suffers

a) no refraction
b) only dispersion
c) only deviation
d) both deviation and dispersion

122. The most energetic electromagnetic radiations are

a) ultraviolet waves b) X-rays
c) gamma rays d) microwaves

123. The wavelength of gamma rays is 0.01 Å. Its frequency is

a) 3×10^{16} Hz b) 3×10^{20} Hz
c) 3×10^{7} Hz d) 3×10^{14} Hz

124. When a wave travels through a medium

a) particles are transferred from one place to another
b) energy is transferred in a periodic manner
c) energy is transferred in a constant speed
d) none of the above statements is applicable

125. Red light is used as a danger signal because of its

a) longest wavelength
b) least wavelength
c) maximum speed
d) least speed

126. The minimum distance between the source and the reflector in air, so that an echo is heard, is approximately equal to

a) 10 m b) 34 m
c) 50 m d) 17 m

127. The amplitude of damped vibrations

a) decreases with time
b) increases with time
c) is constant
d) first decreases and then increases

128. Which of the following is an ohmic resistance ?

a) diode valve b) junction diode
c) filament of a bulb d) nichrome

129. By reducing the amplitude of a sound wave, its

a) pitch increases
b) loudness decreases
c) loudness increases
d) pitch decreases

130. What resistance must be connected to a 15 Ω resistance to provide an effective resistance of 6 Ω?
a) 10 Ω b) 7 Ω
c) 6 Ω d) 8 Ω

131. In series combination of resistances
a) total resistance is reduced
b) current is same in each resistance
c) p.d. is same across each resistance
d) all above are true

132. An electrical appliance has a rating 100 W, 120 V. The resistance of element of appliance when in use is
a) 1.2 Ω b) 144 Ω
c) 120 Ω d) 100 Ω

133. When a current I flows through a resistance R for time t, the electrical energy spent is given by
a) I Rt b) I^2 Rt
c) IR^2t d) $I^2R^2t^2$

134. The rating of a fuse connected in the lighting circuit is
a) 15 A b) 10 A
c) 5 A d) zero

135. When the main switch of the house circuit is put off, it disconnects the
a) live wire only
b) neutral wire only
c) earth wire only
d) both live and neutral

136. A soft iron bar is introduced inside a current carrying solenoid. The magnetic field inside the solenoid will
a) increase b) become zero
c) remain unaffected d) decrease

137. The S.I. unit of magnetic field is
a) N A m b) N^{-1} A m
c) $N^{-1} A^{-1}$ m d) $N A^{-1} m^{-1}$

138. In an electric motor, the energy transformation is from
a) electrical to chemical
b) chemical to light
c) mechanical to electrical
d) electrical to mechanical

139. In a step up transformer
a) $N_s = N_p$ b) $N_s < N_p$
c) $N_s > N_p$ d) none of the above

140. A primary of 800 turns is connected to a 220 V a.c. supply and the secondary has 8 turns. The output voltage will be
a) 20 V b) 2.2 V
c) 2 V d) 0.2 V

141. The direction of induced current is obtained by
a) Fleming's left hand rule
b) Clock rule
c) right hand thumb rule
d) Fleming's right hand rule

142. The S.I. unit of specific heat capacity is
a) J kg^{-1} b) J K^{-1}
c) J kg^{-1} K^{-1} d) kilocal kg^{-1} $^0C^{-1}$

143. The minimum amount of energy required to emit electrons from a metal surface is called the
a) work function b) ionisation energy
c) cohesive energy d) dissociation energy

144. The electron emitter must have
a) low work function and low melting point
b) high work function and high melting point
c) high work function and low melting point
d) low work function and high melting point

145. The change from solid to vapour directly at a constant temperature is called
a) condensation b) regelation
c) vaporisation d) sublimation

146. A radioactive substance emits radiations

a) α, β and γ simultaneously

b) in the order α, β and γ one by one

c) X-rays and γ rays

d) α or β

147. Which of the following radiations is least penetrating

a) α- particles b) β- particles
c) X-rays d) γ - rays

148. Which of the following is most harmful for the human being ?

a) α - particles b) γ - rays

b) β - particles d) all the above

149. Which of the following radiations suffers maximum deflection in a magnetic field ?

a) β - particles b) γ - rays

c) α - particles d) X-rays

150. The material used for safety from nuclear radiations is

a) copper b) platinum
c) lead d) iron