

SIE – 2013 – Set – 4
GA

03069

: INSTRUCTIONS TO CANDIDATES :

THIS BOOKLET CONTAINS 100 QUESTIONS OF 1 MARK EACH IN 20 PAGES. PLEASE CHECK THE QUESTION-SET BEFORE USE.

1. Read the instructions carefully before using the OMR answer sheet provided.
2. Fill in the Part – A of the OMR answer sheet first, mentioning the Roll No. and other data as applicable in the place(s) indicated therein and darken the appropriate circles in blue or black ball point pen.
3. While darkening the circle in Part – B of the OMR answer sheet, use blue or black ball point pen.
4. Do not write any name / surname or put any symbol, sign, slogan, prayer or any mark of identification in Part – B of the OMR answer sheet. Any such act is liable to render the answer sheet unfit for evaluation.
5. Do not use any other form except the OMR answer format provided along with the question-set.
6. Do not tamper with the bar code or any other portion of the OMR answer sheet.
7. Candidates may use the blank sheet attached to these instructions for doing the rough work, if needed.
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9. Return the OMR answer sheet **only** to the Invigilator before leaving the examination hall.
10. Candidates may take with them the respective question-sets after the examination is over.
11. Mobile Phone is not allowed inside the Examination Hall. The candidates are strictly advised **not to carry** any mobile phone with them into the Examination Hall. Any candidate who is in possession of Mobile Phone inside the hall is liable to be debarred from the valuation of his/her answer paper.
12. Violation of these instructions shall entail disqualification of the candidate.

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Time : $1\frac{1}{2}$ hours

Full Marks : 100

Each question carries 1 mark.

Answer all questions.

1. Louis Pasteur developed the vaccine against :

(1) ☒ Rabies
(2) Measles
(3) Influenza
(4) Hepatitis
(5) Chicken pox

2. Dinosaur is an :

(1) ☒ Extinct amphibian
(2) Extinct bird
(3) Extinct fish
(4) Extinct mammal
(5) Extinct reptile

3. A student, instead of multiplying, divided a given number by $\frac{8}{17}$ by mistake. If his answer was 225 more than the correct answer, then find the given number :

(1) 64

(2) ☒ 136

(3) 225

(4) 289

(5) None of these

4. There are three towers — A, B and C. Height of the tower A is 20% less than the height of tower B, while the height of the tower C is 20% more than that of tower B. By what percentage is the height of tower C greater than the height of tower A?

(1) 33.33

(2) 36

(3) 40

(4) 45

(5) ☒ 50

5. A shopkeeper sold a fan at a profit of 10%. Had he purchased it for 5%

- less and sold for Rs. 56 more, he could have gained 25%. What was the cost price of the fan ?
- (1) Rs. 560
 - ☒ (2) Rs. 640
 - (3) Rs. 720
 - (4) Rs. 800
 - (5) Rs. 880
6. Rate of interest remaining same, the difference between compound and simple interests generated in two years on an investment of Rs. 10,000 amounts to Rs. 64. Determine the rate of interest per annum :
- (1) 4%
 - (2) 5%
 - (3) 6%
 - (4) 7%
 - (5) 8%
7. A milkman purchases 50 litres of pure milk. He adds 20% water in half of it and 40% water in rest half. After selling 20 litres each from both the mixtures, he mixes the balance in both. What is the ratio of milk and water in new mixture ?
- (1) 5 : 1
 - (2) 5 : 3
 - (3) 10 : 3
 - (4) 16 : 5
 - (5) 30 : 7
8. The monthly incomes of Hari and Madhu are in the ratio of 5 : 6 and their monthly expenditures are in the ratio of 8 : 11. If each of them saves Rs. 10,500 per month, then find the difference between their monthly incomes :
- (1) Rs. 1,500
 - ☒ (2) Rs. 4,500
 - (3) Rs. 10,500
 - (4) Rs. 22,500
 - (5) Rs. 27,000
9. A, B and C can complete a work in 100, 120 and 150 days respectively. If A leaves after first 20 days and B leaves 30 days before the completion of the work, then in how many days the work is completed ?
- ☒ (1) 40
 - (2) 50
 - ☒ (3) 70
 - (4) 90
 - (5) 100

10. Two pipes can separately fill an empty tank in 2 hours and 3 hours respectively, while a third can empty the full tank in $1\frac{1}{2}$ hours. If all the three pipes are opened together, then in what time the empty tank is going to be filled ?

- (1) $3\frac{1}{2}$ hours
- (2) 4 hours
- (3) 5 hours
- (4) ☒ 6 hours
- (5) $6\frac{1}{2}$ hours

11. The respiratory disorder in which breathing becomes difficult due to spasm in bronchial muscles and narrowing of bronchi is known as :

- (1) Whooping cough
- (2) Tuberculosis
- (3) Pneumonia
- (4) Pleurisy
- (5) ☒ Asthma

12. Which one is the most numerous of the RBCs ?

- (1) Monocytes
- (2) Lymphocytes
- (3) Basophils
- (4) Eosinophils
- (5) Neutrophils

13. Kangaroo endures the heat of summer by :

- (1) Aestivating
- (2) Becoming nocturnal
- (3) Burrowing
- (4) Hibernating
- (5) Producing concentrated urine

14. The flightless bird commonly seen in Antarctica is :

- (1) Albatross
- (2) Pelican
- (3) Penguin
- (4) ☒ Kiwi
- (5) Megapode

15. Yak is :

- (1) A long haired ox found in Tibet
- (2) A horned deer found in the Arctic
- (3) An animal found in Australia
- (4) An animal found in Europe
- (5) An animal found in the Prairies

16. Succulents like cactus are :

- (1) Halophytes
- (2) Hydrophytes

(3) Mesophytes

(4) Sciophytes

(5) Xerophytes

17. Which of the following mainly acts as a barrier to dispersal of marine species ?

(1) Continents

(2) Oceans

(3) Topography

(4) Climate

(5) Vegetation

18. The most genetically modified plant is :

(1) Potato

(2) Rice

(3) Sugarcane

(4) Tobacco

(5) Wheat

19. Which of the following plants has the potential for bio-fuel ?

(1) Alfalfa

(2) Cotton

(3) Jatropha

(4) Maize

(5) Soyabean

20. Which one is known as 'Hansen's disease' ?

(1) Tuberculosis

(2) Tetanus

(3) Typhoid

(4) Anthrax

(5) Leprosy

21. The sum total of all the even integers from 2 to 20 is :

(1) 90

(2) 100

☒ (3) 110

(4) 132

(5) 210

22. Which of the following numbers yields an integer when divided by 6 ?

(1) 25491

(2) 49662

(3) 58917

(4) 63939

(5) 79216

23. Identify the missing number of '?' in the following sequence :

5, ?, -3, -7, -11.

(1) 4

(2) 3

(3) 2

☒ (4) 1

(5) 0

24. Find the formula for the sequence

-5, -1, 3, 7, 11 :

(1) $A_n = n - 5$

☒ (2) $A_n = 4n - 9$

(3) $A_n = -4n + 9$

(4) $A_n = -5n$

(5) $A_n = -5n + 11$

25. Which of the following is **not true** for the data ?

12, 13, 9, 3, 5, 3, 4.

(1) Sum total = 49 ☒

(2) Range = 10

(3) Mode = 3

(4) Median = 5

(5) Mean = 8

Direction (Q. Nos. 26 – 30) : Answer the following questions by analysing the statistics given in the table below :

Table : The daily aggregate income and expenditure of all the families of five labour colonies of a factory.

Labour Colony →	A	B	C	D	E
No. of Families	38	44	38	40	42
Aggregate Daily Income	11160	12320	9576	12040	13808
Aggregate Daily Expenditure	7992	9416	7486	8960	9450

26. Which colony best represents all the colonies in terms of number of families ?

(1) Colony – A

(2) Colony – B

(3) Colony – C

(4) Colony – D

(5) Colony – E

27. Which colony people have the highest average daily income among the colonies ?

(1) Colony – A

(2) Colony – B

(3) Colony – C

(4) Colony – D

☒ (5) Colony – E

28. Which colony people have the lowest average daily expenditure among the colonies ?

(1) Colony – A

(2) Colony – B

(3) Colony – C

(4) Colony – D

(5) Colony – E

29. Which colony people best represent the entire labour class in terms of average daily savings ?
- (1) Colony – A
 - (2) Colony – B
 - (3) Colony – C
 - (4) Colony – D
 - (5) Colony – E
30. In the factory, management decides to engage the workers only for five days in a week, on daily wage, then which colony people shall not face any financial deficit ?
- (1) Colony – A
 - (2) Colony – B
 - (3) Colony – C
 - (4) Colony – D
 - (5) Colony – E
31. A train moving from New Delhi to Hyderabad at a uniform speed of 70 kms. per hour covers a total distance of 1800 kms. Another train starting at the same time from Hyderabad moves to New Delhi in the same route at a uniform speed of 50 kms. per hour. At what distance from New Delhi shall both the trains meet each other ?
- (1) 750 kms.
 - (2) 900 kms.
 - (3) 1050 kms.
 - (4) 1200 kms.
 - (5) None of the above
32. A power boat moves at a speed of 10 kms. per hour in still water. If it moves in a stream that flows at a speed of 5 kms. per hour, then find the time difference between the downstream and upstream movements of the boat for a distance of 105 kms. :
- (1) 5 hours
 - (2) 7 hours
 - (3) 14 hours
 - (4) 15 hours
 - (5) 21 hours
33. A cyclist crosses a standing train in one minute, while the moving train crosses the cyclist in 12 seconds. If the train moves at a uniform speed of 72 kms. per hour, then find the speed of the cyclist :
- (1) 9 kms. per hour

- (2) 10 kms. per hour
- (3) 11 kms. per hour
- (4) 12 kms. per hour
- (5) 15 kms. per hour

34. Two persons start from a place on bicycle. The first person rides at a speed of 12 kms. per hour for first 6 hours and then covers the rest of the distance in 9 hours at the rate of 10 kms. per hour. If the second cyclist covers the entire distance in 12 hours at uniform speed then find his speed ?

- (1) 10.0 kms. per hour
- (2) 12.0 kms. per hour
- (3) 12.5 kms. per hour
- (4) 13.5 kms. per hour
- (5) 15.0 kms. per hour

35. Which of the following terms shall have a non-zero value, if $y = -x$, x being a positive integer ?

- (1) $x + y$
- (2) $x^2 - y^2$
- (3) $(x + y)^2$
- (4) $x^2 + xy$
- (5) $xy - y^2$

36. Find the value of '?' in the following equation.

$$\frac{x^{m+n} \cdot x^{n+1} \cdot x^{l+m}}{(x^m \cdot x^n \cdot x^l)^2} = ?$$

- (1) 0
- (2) $\frac{1}{2}$
- (3) 1
- (4) 2
- (5) None of the above

37. Simplify the following equation to find the value of x :

$$x = 5\sqrt{48} - 3\sqrt{27} + 2\sqrt{75} - 2\sqrt{300}$$

- (1) $\sqrt{3}$
- (2) 3
- (3) 5
- (4) $9\sqrt{3}$
- (5) $10\sqrt{3}$

38. The honeycomb is a network of regular polygons. What is the type ?

- (1) Quadrilateral
- (2) Pentagon
- (3) Hexagon
- (4) Octagon
- (5) Decagon

39. In a quadrilateral ABCD, the angles ABC and BCD are 120° and 90° respectively. What type of quadrilateral is this ?
- (1) Square ✗
 - (2) Rectangle
 - (3) Rhombus ✗
 - (4) ☒ Parallelogram
 - (5) None of the above
40. In a circular running track, the outer and inner circumferences are 440 mts. and 352 mts. respectively. If 8 players are to run in the track, then what will be the width of the track for each player ?
- (1) 1.27 mts.
 - (2) 1.40 mts.
 - (3) 1.53 mts.
 - (4) 1.75 mts.
 - (5) 2.00 mts.
41. Which Nobel Laureate is the recipient of the prize twice, once for Chemistry and second for Peace ?
- (1) Paul Berg
 - (2) Frederick Sanger
 - (3) John Bardeen
 - (4) Linus Carl Pauling
 - (5) Marie Curie
42. Who is the author of the book "Wings of Fire" ?
- (1) Anita Nair
 - (2) ☒ A. P. J. Abdul Kalam
 - (3) R. K. Narayan
 - (4) Salman Rushdie
 - (5) Vikram Seth
43. Which of the following areas is common to both Magsaysay and Jawaharlal Nehru Awards ?
- (1) International understanding
 - (2) Community leadership
 - (3) Journalism
 - (4) Literature and creative arts
 - (5) ☒ Public service
44. The first of the Arjuna awardees from Odisha is :
- (1) ☒ Dilip Tirkey
 - (2) Ignace Tirkey
 - (3) Jyoti Sunita Kullu
 - (4) Minati Mohapatra
 - (5) Rachita Mistri
45. Which of the following trophies is different from the other four ?
- (1) Aga Khan Cup
 - (2) Azlan Shah Trophy

- (3) Nehru Cup
- (4) Dhyanchand Trophy
- (5) Durand Cup

46. 20th August is observed as the :

- (1) Hiroshima Day
- (2) Kargil Victory Day
- (3) International Youth Day
- (4) ~~Sadbhavna Dibas~~
- (5) World Photography Day

47. Which of the following group of hotels in India is under public sector ?

- (1) Ambassador
- (2) Ashoka
- (3) Le Meridian
- (4) Oberoi
- (5) Taj

48. Who is considered as the 'father of standard Odia language' ?

- (1) Achutananda Dasa
- (2) Bhima Bhoi
- (3) Fakir Mohan Senapati
- (4) Jagannath Dasa
- (5) Sarala Dasa

49. Which of the following is not resulted due to the rotation of the earth ?

- (1) Causation of day and night

- (2) Causation of seasons
- (3) Time difference between meridians
- (4) Change in the direction of wind and ocean currents
- (5) Rise and fall of tides everyday

50. Identify the country having a different standard time from the other four :

- (1) Hong Kong
- (2) Japan
- (3) Malaysia
- (4) Phillippines
- (5) Singapore

51. Which is the geo-stationary satellite recently launched into space by India to observe weather and climate ?

- (1) GSAT - 7
- (2) GSAT - 10
- (3) IRNSS - 1A
- (4) INSAT - 3D
- (5) SARAL

52. Which Indian Naval Aircraft Carrier has been commissioned in November, 2013 ?

- (1) INS Beas

(2) INS Delhi

☒ (3) INS Vikrant

(4) INS Vikramaditya

(5) INS Virat

53. What is the chronological order of Mr. Pranab Mukherjee in the list of elected Presidents of India ?

(1) 11th

(2) 12th

☒ (3) 13th

☒ (4) 14th

(5) 16th

54. The last of the recipients of 'Miss World' title by an Indian is :

(1) Aiswarya Rai

(2) Diana Hayden

(3) Priyanka Chopra

☒ (4) Reita Faria

(5) Yukta Mookhey

55. The legendary singer who passed away of late is :

(1) Bhupen Hazarika

(2) Manna Dey

(3) Pandit Ravishankar

(4) Raghunath Panigrahi

(5) Shamshad Begum

56. Which has been the most disastrous of the tropical cyclones in the world in the year 2013 ?

(1) Francisco

(2) Haiyan

(3) Lekima

☒ (4) Phailin

(5) Usagi

57. Who is the recipient of the prestigious 'Sarala Samman', 2013 ?

(1) Achutananda Pati

(2) Mohapatra Nilamani Sahoo

(3) Ramakanta Rath

(4) Sitakanta Mohapatra

(5) Srinibas Udgata

58. Which militant group is suspected of the recent serial blasts in Patna on 27th October, 2013 in Narendra Modi's rally and meeting ?

(1) Al-Qaida

(2) Hizb-ul-Mujahideen

(3) Jamiat-ul-Mujahideen

(4) Indian Mujahideen

(5) Jaish-e-Mohammad

59. Sachin Tendulkar's 200th test has been the match between India and :

(1) Australia

(2) England

(3) South Africa

(4) Sri Lanka

☒ (5) West Indies

60. Which woman athlete had bagged two gold medals for 200 metres as well as 100 metres race in the 53rd National Open Athletics at Ranchi?

(1) Chavi Sharawat

(2) Dutee Chand

(3) Preeja Sridharan

☒ (4) Sudha Singh

(5) Suriya Loganathan

61. The place near which the Mahanadi is joined by its largest tributary is :

(1) Boudh

(2) Cuttack

(3) Kantilo

☒ (4) Sambalpur

(5) Sonapur

62. 'While Mangalore gets very high rainfall, Bangalore receives scanty rainfall from the summer monsoon.'

This is due to the effect of :

(1) Latitude

(2) Convection

(3) Cyclone

(4) Fronts

(5) Mountain

63. Which of the following is supposed to be the most stable environment?

(1) Tropical Rain forest

(2) Temperate grassland

(3) Hilly region

(4) Deep Sea region

(5) Wet Sub-tropical region

64. Find the odd one out on the basis of the nature of mineral activity :

(1) Bailadila

(2) Dalli Rajhara

(3) Kudremukh

(4) Noamundi

(5) Panchapatamali

65. Which of the following hydel projects is on the river Kaveri?

(1) Nagarjuna Sagar

(2) Kakrapara

(3) Rihand

(4) Shrisaillam

(5) Sivasamudram

☒ 66. Which is the longest of the following National Highways in India?

(1) No. 2

(2) No. 5

(3) No. 6

~~(4) No. 7~~

(5) No. 8

67. Which of the following hill train in India covers the longest distance ?

- (1) Darjeeling-Himalayan Railway
- (2) Kalka-Shimla Railway
- (3) Kangra Valley Railway
- (4) Neral-Matheran Railway
- (5) Nilgiri Mountain Railway

68. Which of the following ports has been developed near the Mumbai Port ?

- ☒ (1) Kandla
- (2) Ennore
- (3) Marmagao
- (4) Nhava Seva
- (5) Tuticorin

69. Which of the following biosphere reserves in India has been recognized by UNESCO on World Network of Biosphere Reserves ?

- (1) Agastyamalai
- (2) Nanda Devi
- (3) Nilgiri
- (4) Nokrek
- (5) Simlipal

70. What are the thorns in the cacti ?

- (1) Modified stem
- (2) Stems
- (3) Modified leaves
- (4) Modified roots
- (5) None of these

71. Which country has the largest number of time zones ?

- (1) Australia
- (2) Canada
- (3) Indonesia
- (4) Russia
- (5) United States

72. Which mountain is different from the other four in terms of its location ?

- (1) Alps
- (2) Apennines
- (3) Appalachian
- (4) Caucasus
- (5) Pyrenees

73. The Missouri-Mississippi river drains into :

- (1) The Caribbean Sea
- (2) The Gulf of Mexico
- (3) The Hudson Bay
- (4) The Mediterranean Sea
- (5) The South Atlantic

74. Which of the following local winds is known as the 'snow eater' ?
- (1) Chinook
 - (2) Foehn
 - (3) Harmattan
 - (4) Khamsin
 - (5) Sirocco
75. A cloudy night is hotter than a clear night. This is due to :
- (1) Greater convection
 - (2) Increase in sensible heat
 - (3) Increase in solar radiation
 - (4) Influx of latent heat
 - (5) Prevention of earth radiation
76. Which of the following is better known as 'contour' ?
- (1) Isobar
 - (2) Isobath
 - (3) Isohyet
 - (4) Isohypse
 - (5) Isotherm
77. Find the odd pair out :
- (1) Chhattisgarh – Raipur
 - (2) Jharkhand – Ranchi
 - (3) Mizoram – Aizawl
 - ☒ (4) Panaji – Goa
 - (5) Sikkim – Gangtok
78. The Ladakh range is situated in the :
- (1) Eastern Himalayas
 - (2) Himadri
 - (3) Himachal
 - (4) Siwaliks
 - (5) Trans-Himalaya
79. Find the odd one out on the basis of the direction of flow :
- (1) The Chambal
 - (2) The Narmada
 - (3) The Sabarmati
 - (4) The Saravati
 - (5) The Tapti
80. Which of the following lakes in India is a fresh water lake ?
- ☒ (1) The Chilika
 - (2) The Pulicat
 - (3) The Sambhar
 - (4) The Vambanad
 - ☒ (5) The Wular
81. Who discovered the relationship $E = mc^2$?
- (1) Albert Einstein
 - (2) H. D. Becquerel

- (3) Marie Curie
(4) Otto Hahn
(5) Robert Oppenheimer
82. Which of the following radioactive elements is used in the central core of the hydrogen bombs ?
(1) Actinium
(2) Plutonium
(3) Polonium
(4) Radium
(5) Thorium
83. Which of the following instruments is usually used in the submarines ?
(1) Electroscope
(2) Microscope
(3) ~~Periscope~~
(4) Stereoscope
(5) Telescope
84. A perspiring man feels relief under a fan. This is due to the increase in :
(1) Advection
(2) Condensation
(3) Evaporation
(4) Precipitation
(5) Sublimation
85. Which one is not a halogen ?
(1) Benzene
(2) Chlorine
(3) Bromine
(4) Fluorine
(5) Iodine
86. Which is a crystalline form of carbon ?
(1) Charcoal
(2) Coal
(3) Coke
(4) ~~Diamond~~
(5) Dry ice
87. In the torch batteries the anode is made up of :
(1) Carbon
(2) Copper
(3) Iron
(4) Platinum
(5) Zinc
88. Which oxide of nitrogen is known as the 'Laughing Gas' ?
(1) ~~Nitric Oxide~~
(2) ~~Nitrous Oxide~~
(3) Nitrogen Dioxide
(4) Dinitrogen Trioxide
(5) Dinitrogen Pentoxide

89. Which organ is known as the 'Blood Bank' of the human body ?

- (1) Heart
- (2) Liver
- ☒ (3) Kidney
- (4) Lungs
- ☒ (5) Spleen

90. Which one does contain the 'Blue Print' of life ?

- (1) Plasma membrane
- ☒ (2) DNA
- (3) mRNA
- (4) rRNA
- (5) tRNA

91. Which Five-Year Plan in India is called the 'Mahalanobis Plan' ? In 1955

- (1) First
- ☒ (2) Second
- (3) Third
- (4) Fourth
- (5) Fifth

92. The 'one rupee' currency note bears the signature of :

- (1) Governor, Reserve Bank of India
- ☒ (2) Minister of Finance
- (3) President of India

(4) Prime Minister of India

☒ (5) Secretary, Ministry of Finance

93. What is the maximum total taxable income up to which a resident woman at the age of 81 shall not pay any tax for the current financial year 2013-14 in India ?

- (1) Rs. 1,80,000
- (2) Rs. 2,00,000
- (3) Rs. 2,50,000
- (4) Rs. 5,00,000
- (5) Rs. 10,00,000

94. Which emperor of the Magadha Empire had founded the capital at Pataliputra ?

- (1) Ajatashatru
- ☒ (2) Bimbisara
- (3) Mahapadma Nanda
- (4) Shishunaga
- (5) Udayin

95. Four of the following happened in one year, while one was not. Identify the odd one :

- (1) Cripps Mission to India
- (2) Commencement of Congress Radio
- (3) Lord Wavell convened Shimla Conference

(4) Establishment of 'Azad Hind Fauj'

(5) Quit India Movement

X 96. Who is popularly known as the 'Frontier Gandhi' ?

(1) Bal Gangadhar Tilak X

~~(2) Dadabhai Naoroji~~

~~(3) Khan Abdul Ghaffar Khan~~

(4) Maulana Abul Kalam Azad X

(5) Mohammed Ali Jinnah

✓ 97. The first woman Chief Minister of an Indian State is :

(1) Mrs. Annie Besant

(2) Mrs. Indira Gandhi

~~(3) Mrs. Sarojini Naidu~~

~~(4) Mrs. Sucheta Kripalani~~

(5) Mrs. Vijaya Laxmi Pandit

98. According to which provision of Indian Citizenship Act a foreign woman marrying an Indian Citizen can become a citizen of India ?

(1) Citizenship by birth

(2) Citizenship by descent

(3) Citizenship by incorporation of territory

(4) Citizenship by naturalisation

(5) Citizenship by registration

99. Which union territory is different from the other four in terms of the designation of the Head of Office ?

(1) Dadra and Nagar Haveli

(2) Daman and Diu

~~(3) Delhi~~

(4) Lakshadweep

(5) Pondicherry

100. A vehicle starts from rest and gradually increases its motion. What is the phenomenon called ?

~~(1) Acceleration~~

(2) Displacement

(3) Retardation

(4) Speed

(5) Velocity