Prepp.in

Prepp

Your Personal Exams Guide



- NDA
- CDS
- SSC CGL
- CBSE UGC NET
- IAS
- SSC CHSL
- CTET
- MPSC
- AFCAT
- CSIR UDC NET
- IBPS PO
- UP POLICE
- SSC MTS
- SBI PO
- BPSC
- UPTET
- IBPS RRB
- IBPS CLERK
- IES
- UPSC CAPF
- SSC Stenogr..
- RRB NTPC
- SSC GD
- RBI GRADE B
- RBI Assistant
- DSSSB

BSF HC RM (Radio Mechanic) 20 Nov 2022 Official Paper

Total Time: 2 Hour **Total Marks:** 200

Instructions

Sl No.	Section Name	No. of Question	Maximum Marks	Negative Marks	Positive Marks
1	Physics	40	80	0.25	2
2	Chemistry	20	40	0.25	2
3	Mathematics	20	40	0.25	2
4	English & GK	20	40	0.25	2

1.) A total of 120 minutes is allotted for the examination.

2.) The server will set your clock for you. In the top right corner of your screen, a countdown timer will display the remaining time for you to complete the exam. Once the timer reaches zero, the examination will end automatically. The paper need not be submitted when your timer reaches zero.

3.) There will, however, be sectional timing for this exam. You will have to complete each section within the specified time limit. Before moving on to the next section, you must complete the current one within the time limits.

Your Personal Exams Guide

Download Prepp APP GET IT ON Google Play

Physics

1. A man is at rest in the middle of a horizontal plane of perfectly smooth ice. He can move himself to the shore by making use of Newton's **(+2, -0.25)**

   a. first law

   b. second law

   c. third law

   d. all of the above

---

2. Compared to audible sound waves, ultrasound waves have **(+2, -0.25)**

   a. higher speed

   b. higher frequency

   c. Both (1) and (2)

   d. long wavelength

---

3. What is the minimum distance (in metres) required to hear an echo? **(+2, -0.25)**

   a. 10

   b. 13

   c. 17

   d. 21

---

4. What is the process of transferring of charge from a charged object to the earth called? **(+2, -0.25)**

Your Personal Exams Guide

Download Prepp APP GET IT ON Google Play

a. Discharging

b. Earthing

c. Interaction

d. Lightning

---

5. _____ is the "work done in moving a unit charge between two points in an electric circuit." (+2, -0.25)

a. Current

b. Potential difference

c. Power

d. Resistance

---

6. At low temperature, lead behaves as a (+2, -0.25)

a. semiconductor

b. Super conductor

c. Insulator

d. Conductor

---

7. The resistance of a metallic wire is (+2, -0.25)

a. directly proportional to its length and inversely proportional to its area of cross-section.

Prepp Download Prepp APP GET IT ON Google Play

b. inversely proportional to the product of its area of cross-section and length.

c. inversely proportional to its length and directly proportional to its area of cross-section

d. directly proportional to the product of its area of cross-section and length.

---

8. The basic difference between an AC generator and DC generator is that **(+2, -0.25)**

a. AC generator has an electromagnet while a DC generator has permanent magnet

b. AC generator has slip rings while the DC generator has commutator

c. DC generators will generate a higher voltage

d. AC generator will generate a higher voltage

---

9. Which one of the following devices changes low voltage alternating current to high voltage alternating current and vice-versa? **(+2, -0.25)**

a. Generator

b. Motor

c. Transformer

d. Vibrator

---

10. The symbol of SI unit of inductance is H. It stands for **(+2, -0.25)**

a. Holm

Prepp Download Prepp APP GET IT ON Google Play

b. Halogen

c. Henry

d. Hertz

---

11. The phenomena of electromagnetic induction is _____. **(+2, -0.25)**

a. the process of charging a body

b. the process of generating magnetic field due to a current passing through a coil

c. induced current in a coil due to relative motion between a magnet and the coil

d. the process of rotating a coil of an electric motor

---

12. How many images will be formed if a point light source is placed between two parallel plane mirror? **(+2, -0.25)**

a. Two

b. Four

c. Eight

d. Infinite

---

13. Which colour is formed when red and green are mixed? **(+2, -0.25)**

a. Light blue

b. Yellow

Prepp Download Prepp APP GET IT ON Google Play

c. White

d. Grey

---

14. Bifocal lenses are used by people suffering from _____. **(+2, -0.25)**

a. myopia and hypermetropia

b. hypermetropia but not myopia

c. myopia but not hypermetropia

d. myopia or hypermetropia

---

15. De-Broglie equation states the **(+2, -0.25)**

a. dual nature

b. particle nature

c. wave nature

d. none of the above

---

16. Which one of the following types of radiations has the smallest wavelength? **(+2, -0.25)**

a. Microwaves

b. Infrared

c. Visible light

d. X-rays

Prepp Download Prepp APP GET IT ON Google Play

17. A photon of X-ray has energy of 1 keV. A photon of visible radiation has energy of 3 eV. In this context, which one of the following statement(s) is / are not correct? **(+2, -0.25)**

a. The wavelength of X-ray photon is less than the wavelength of visible radiation photon.

b. Both the photons have different energies.

c. The speeds of both the photons in vacuum are different.

d. The frequency X-ray photon is higher than the frequency of visible radiation photon.

---

18. In which one of the following devices, the light energy is converted into the electrical energy? **(+2, -0.25)**

a. Light-emitting diode

b. Laser diode

c. Solar cell

d. Transistor

---

19. Through which mode of propagation the radiowaves can be sent from one place to another? **(+2, -0.25)**

a. Space wave propagation

b. Sky wave propagation

c. Ground wave propagation

Your Personal Exams Guide

Download Prepp APP GET IT ON Google Play

d. All of the above

---

20. _____ are used for communication in artificial satellites. **(+2, -0.25)**

a. Infrared waves

b. Radio waves

c. Ultraviolet (UV) rays

d. Amplitude Modulation (AM) waves

---

21. When arsenic is added as an impurity to silicon, the resulting material is **(+2, -0.25)**

a. p-type semiconductor

b. n-type semiconductor

c. n-type conductor

d. None of the above

Your Personal Exams Guide

---

22. How can the channel width in a junction field effect transistor be controlled? **(+2, -0.25)**

a. By two back-biased p-n junctions

b. By the length of the source

c. By the length of the drain

d. By the length of both the source and the drain

Prepp Download Prepp APP GET IT ON Google Play

23. For an NPN bipolar transistor, what is the mainstream of current in the base region? (+2, -0.25)

a. Drift of holes

b. Diffusion of holes

c. Drift of electrons

d. Diffusion of electrons

---

24. Identify the feature of MS-Word which provides the option of increasing the size of the first letter of a text. (+2, -0.25)

a. Footnotes

b. Tab stop

c. Drop cap

d. None of the above

Your Personal Exams Guide

25. Modulation is of _____ types. (+2, -0.25)

a. Analog modulation

b. Digital modulation

c. Pulse modulation

d. All of the above

---

26. Which of the following is an operating system? (+2, -0.25)

a. UNIX

Prepp Download Prepp APP GET IT ON Google Play

b. JAVA

c. ORACLE

d. MS-Office

---

27. Which of the following is not a number system in reference to computers? **(+2, -0.25)**

a. Binary number system

b. Decimal number system

c. Octal number system

d. Penta number system

---

28. The universal gate is _____. **(+2, -0.25)**

a. NAND gate

b. OR gate

c. AND gate

d. None of the above

---

29. A counter circuit is usually constructed of _____. **(+2, -0.25)**

a. A number of latches connected in cascade form

b. A number of NAND gates connected in cascade form

c. A number of flip-flops connected in cascade

Prepp Download Prepp APP GET IT ON Google Play

d. A number of NOR gates connected in cascade form

---

30. In digital logic, a counter is a decive which _____. **(+2, -0.25)**

a. counts the number of outputs.

b. stores the number of times a particular event or process has occurred.

c. stores the number of times a clock pulse rises and falls.

d. counts the number of inputs.

---

31. The process of super imposing information onto a carrier wave is called:- **(+2, -0.25)**

a. Transmission

b. Communication

c. Modulation

d. Demodulation

Your Personal Exams Guide

---

32. Modulation is required **(+2, -0.25)**

a. to transmit electrical signals over an antenna through free space.

b. to improve the signal to noise ratio.

c. to make the low frequency signals travel long distance.

d. All of the above.

---

33. Which of the following devices is used for modulation & demodulation? **(+2, -0.25)**

Prepp Download Prepp APP GET IT ON Google Play

a. Multiplexer

b. Serial port

c. Modem

d. Gate way

---

34. Calculate the modulation percentage if the modulation signal is 8 V and carrier is of 12 V. **(+2, -0.25)**

a. 50

b. 67

c. 150

d. 33

---

35. _____ feature of MS Word helps to create a list in a document. **(+2, -0.25)**

a. Word Art

b. Scaling

c. Bullets and Numbering

d. Word Wrap

---

36. Which of the following IC logic families has minimum value of fan-out? **(+2, -0.25)**

a. ECL

b. CMOS

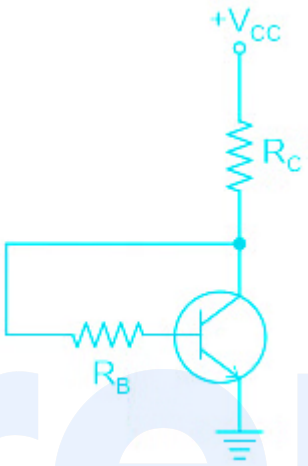
Prepp Download Prepp APP GET IT ON Google Play

c. Low Power Schottky TTL

d. Standard TTL

---

37. Which type of transistor baising is shown in the given figure? **(+2, -0.25)**



a. Emitter bias

b. Voltage divider bias

c. Collector feedback bias

d. Base bias

Your Personal Exams Guide

---

38. A transistor amplifier has high output impedance because _____.

(+2, -0.25)

a. emitter is heavily doped

b. collector has reverse bias

c. collector is wider than emitter or base

d. None of the above

Prepp Download Prepp APP GET IT ON Google Play

39. Which work is not done by a computer? **(+2, -0.25)**

a. Computing

b. Processing

c. Understanding

d. Outputing

---

40. The first supercomputer in the world is _____. **(+2, -0.25)**

a. CRAY-1

b. PARAM

c. TIANHE-2

d. IBM-370

Prepp
Your Personal Exams Guide

Prepp Download Prepp APP GET IT ON Google Play

Chemistry

41. How many values of spin quantum number is possible? **(+2, -0.25)**

a. 2

b. 3

c. 4

d. 5

---

42. The atomic number of which of the following elements is more than that of phosphorus? **(+2, -0.25)**

a. Aluminium

b. Silicon

c. Chlorine

d. Magnesium

---

43. What happens in the rusting of iron? **(+2, -0.25)**

a. Decomposition

b. Displacement

c. Oxidation

d. Reduction

Prepp Download Prepp APP GET IT ON Google Play

44. During galvanization, which metal is used for coating iron and steel objects, preventing them from rusting? **(+2, -0.25)**

a. Zinc

b. Copper

c. Aluminium

d. Bronze

---

45. _____ are homogeneous mixtures of two or more components. **(+2, -0.25)**

a. Amalgams

b. Solutions

c. Enzymes

d. Emulsions

---

46. Which one among the following is not a chemical change? **(+2, -0.25)**

a. Curdling of milk

b. Ripening of fruit

c. Evaporation of water

d. Burning of coal

---

47. Ethanol containing 5% water is known as **(+2, -0.25)**

a. Rectified spirit

Prepp Download Prepp APP GET IT ON Google Play

b. Absolute alcohol

c. Dilute alcohol

d. Power alcohol

---

48. Which of the following is an aldehyde? **(+2, -0.25)**

a. Propanal

b. Pronanol

c. Propanone

d. Propine

---

49. Food cans are coated with tin but not with zinc because **(+2, -0.25)**

a. zinc is costlier than tin

b. zinc has a higher melting point than tin

c. zinc is more reactive than tin

d. tin is more reactive than zinc

---

50. Which one of the following acids is used in lead storage batteries? **(+2, -0.25)**

a. Hydrochloride Acid

b. Hydrofluoric acid

c. Sulphuric acid

d. Sulphurous acid

Your Personal Exams Guide

Prepp Download Prepp APP GET IT ON Google Play

51. On exposure to moist air, copper gains a green coat on its surface due to the formation of which one of the following compounds? **(+2, -0.25)**

a. Copper carbonate

b. Copper oxide

c. Copper sulphate

d. Copper nitrate

52. The gas used for artificial ripening of green fruits is _____. **(+2, -0.25)**

a. acetylene

b. ethylene

c. ethane

d. carbon dioxide

Prepp
Your Personal Exams Guide

53. A bee-sting leaves an acid which causes pain and irritation. The injected acid is **(+2, -0.25)**

a. acetic acid

b. sulphuric acid

c. citric acid

d. methanoic acid

54. Aqua - regia is a mixture of the following in the ratio 1 : 3 by volume **(+2, -0.25)**

Prepp Download Prepp APP GET IT ON Google Play

a. conc. HNO_3 and conc. HCl

b. conc. HNO_3 and conc. H_2SO_4

c. dil. HCl and dil. HNO_3

d. conc. HCl and conc. HNO_3

---

55. Which of the following formulae represents limestone? **(+2, -0.25)**

a. CaSO 4

b. CaCO 3

c. CaO

d. MgSO 4

---

56. Urea, a commonly used nitrogen - based fertiliser, is prepared by the reaction between ammonia and _____. **(+2, -0.25)**

a. carbon dioxide

b. hydrogen

c. oxygen

d. sulphur

---

57. Which is the most reactive metal? **(+2, -0.25)**

a. Sodium

b. Calcium

Your Personal Exams Guide

Prepp Download Prepp APP GET IT ON Google Play

c. Iron

d. Potassium

---

58. Which one of the following materials is strongest? (+2, -0.25)

a. German silver

b. Brass

c. Steel

d. Graphene

---

59. Which one of the following is used as anesthetic? (+2, -0.25)

a. NH 3

b. NO

c. NO 2

d. N 2 O

Prepp Your Personal Exams Guide

---

60. In a periodic table, while moving from left to right in a period, number of _____ remains same. (+2, -0.25)

a. electrons

b. protons

c. shells

d. neutrons

Prepp Download Prepp APP GET IT ON Google Play

Mathematics

61. How many two-digit numbers are divisible by 3 or 5? **(+2, -0.25)**

a. 48

b. 41

c. 42

d. 40

---

62. Which of the following numbers is divisible by 15? **(+2, -0.25)**

a. 1,65,485

b. 3,06,045

c. 2,12,695

d. 2,95,145

Your Personal Exams Guide

63. If cos 27° = x, then the value of tan 63° is:- **(+2, -0.25)**

a. $\frac{\sqrt{1+x^2}}{x}$

b. $\frac{x}{\sqrt{1+x^2}}$

c. $\frac{\sqrt{1-x^2}}{x}$

d. $\frac{x}{\sqrt{1-x^2}}$

---

64. If $\sqrt{\frac{1-\cos\theta}{1+\cos\theta}} \times \sqrt{\frac{\operatorname{cosec}\theta-\cot\theta}{\operatorname{cosec}\theta+\cot\theta}} = \frac{1-r}{1+r}$, then the value of r is **(+2, -0.25)**

a. sin θ

Prepp Download Prepp APP GET IT ON Google Play

b. cosec θ

c. sec θ

d. cos θ

---

65. Diagonals of a rhombus are respectively 4 cm and 12 cm. Its area (in cm^2) is equal to:- **(+2, -0.25)**

a. 12

b. 24

c. 36

d. 8

---

66. In triangle ABC, the length of BC is less than twice the length of AB by 2 cm. The length of AC exceeds the length of AB by 10 cm. The perimeter is 32 cm. The length (in cm) of the smallest side of the triangle is: **(+2, -0.25)**

a. 4

b. 10

c. 8

d. 6

---

67. The area of a sector of a circle with central angle 60° is A. The circumference of the circle is C. Then A (Area) is equal to : **(+2, -0.25)**

a. $\frac{c^2}{6\pi}$

Your Personal Exams Guide

Prepp Download Prepp APP GET IT ON Google Play

b. $\frac{c^2}{18\pi}$

c. $\frac{c^2}{24\pi}$

d. $\frac{c^2}{4\pi}$

---

68. A diagonal of a quadrilateral is 40 cm. The length of the perpendicular to the opposite ends is 7.5 cm and 8.6 cm. What is the area of quadrilateral? **(+2, -0.25)**

a. 368

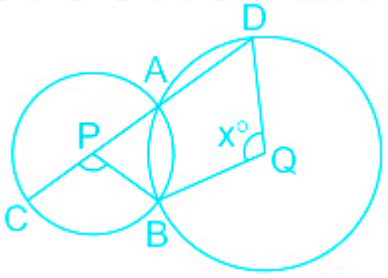
b. 322

c. 28

d. 434

---

69. In the following figure, P and Q are centers of two circles. The circles are intersecting at points A and B. PA produced on both the sides meets the circles at C and D. If ∠ CPB = 100°; then find the value of x. **(+2, -0.25)**



a. 115

b. 120

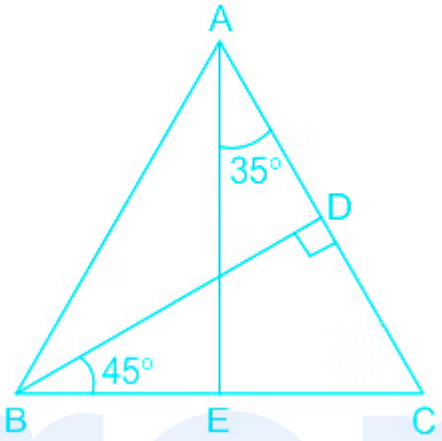
c. 110

Prepp Download Prepp APP GET IT ON Google Play

d. 100

---

70. In the given figure BD is perpendicular to AC then what will be the measure of angle AEB? **(+2, -0.25)**



a. 80°

b. 100°

c. 60°

d. 45°

Prepp
Your Personal Exams Guide

---

71. The cost of 2 tables and 4 chairs is Rs. 16,000 while the cost of 1 table is equal to the cost of 6 chairs. Find the cost of 9 chairs. **(+2, -0.25)**

a. 9000

b. 12000

c. 6000

d. None of the above

Prepp Download Prepp APP GET IT ON Google Play

72. If $x + \frac{1}{x} = 5$, then the value of $x^2 + \frac{1}{x^2}$ is ; **(+2, -0.25)**

a. 23

b. 25

c. 29

d. 27

---

73. The table given below shows the number of students having obtained different marks. **(+2, -0.25)**

Marks	Number of Students
9 – 11	6
11 – 13	5
13 – 15	2
15 – 17	2
17 – 19	5

What is the mean marks per student?

a. 13.5

Your Personal Exams Guide

Download Prepp APP GET IT ON Google Play

b. 12.25

c. 15.5

d. 14.25

---

74. Solve: 5x - 3 < 3x + 1 **(+2, -0.25)**

a. $x \leq 2$

b. $x = 2$

c. $x \geq 2$

d. $x < 2$

---

75. The matrix $A = \begin{bmatrix} 0 & 0 & 4 \\ 0 & 4 & 0 \\ 4 & 0 & 0 \end{bmatrix}$ is a **(+2, -0.25)**

a. Square matrix

b. Diagonal matrix

c. Unit matrix

d. None of the above

---

76. Value of $\int x \log x \, dx$ is **(+2, -0.25)**

a. $\frac{x^2 \log x}{2} - \frac{x^2}{4} + C$

b. $\frac{x \log x}{2} - \frac{x}{4} + C$

c. $x^2 \log x - \frac{1}{4x} + C$

Your Personal Exams Guide

Prepp Download Prepp APP GET IT ON Google Play

d. $\frac{(\log x)^2}{2} - \frac{x^2}{4} + C$

---

77. $\int x^3 e^{x^2} dx =$ (+2, -0.25)

a. $\frac{1}{2}(x^2+1)e^{x^2} + C$

b. $(x^2+1)e^{x^2} + C$

c. $\frac{1}{2}(x^2-1)e^{x^2} + C$

d. $(x^2-1)e^{x^2} + C$

---

78. Find the solution of the differential equation (+2, -0.25)

$\frac{dy}{dx} = e^{x+y} + x^2 e^y$

a. $e^x - e^y + \frac{y^3}{3} = C$

b. $e^x + e^y + \frac{x^3}{3} = C$

c. $e^x + e^{-y} + \frac{x^3}{3} = C$

d. $e^x + e^{-y} + \frac{y^3}{3} = C$

Your Personal Exams Guide

---

79. Find the order and degree of the differential equation (+2, -0.25)

$\left(\frac{d^3y}{dx^3}\right)^2 = \sqrt{\frac{dy}{dx}}$

a. 3, 4

b. 4, 3

c. 2, 1

d. 1, 2

Prepp Download Prepp APP GET IT ON Google Play

80. The HCF of two polynomials is $x^2 - 1$ and their LCM is $x^4 - 10x^2 + 9$. If one of the polynomials is $x^3 - 3x^2 - x + 3$, find the other. **(+2, -0.25)**

a. $x^3 - 3x^2 + x + 3$

b. $x^3 + 3x^2 - x + 3$

c. $x^3 + 3x^2 - x - 3$

d. $x^3 - 3x^2 - x - 3$

Prepp
Your Personal Exams Guide

Prepp Download Prepp APP GET IT ON Google Play

English & GK

81. Who is the chairman of Central Board of Secondary Education (CBSE)? **(+2, -0.25)**

a. M Jagdish Kumar

b. Suman Beri

c. Nidhi Chibber

d. Prasoon Joshi

---

82. Which of the following rulers used to write poems under the surname of "Gulrukhi"? **(+2, -0.25)**

a. Ibrahim Lodi

b. Akbar

c. Sikandar Lodi

d. Bahlol Lodi

Prepp Your Personal Exams Guide

---

83. The word 'Utkala' in the National Anthem of India refers to the modern state of **(+2, -0.25)**

a. Odisha

b. Rajasthan

c. Andhra Pradesh

d. Uttrakhand

---

84. Who was the President of India during period 1977-1982? **(+2, -0.25)**

Prepp Download Prepp APP GET IT ON Google Play

a. Zakir Hussain

b. R Venkatarman Reddy

c. Neelam Sanjeev

d. Rajendra Prasad

---

85. Hridayanath award carries a cash prize of- **(+2, -0.25)**

a. Rs. 500,000

b. Rs. 99,999

c. Rs. 100,000

d. Rs. 250,000

---

86. Where is Manas National Park located in India? **(+2, -0.25)**

a. Madhya Pradesh

b. Rajasthan

c. Assam

d. Himachal Pradesh

---

87. Who was the Captain of first world cup winner team of cricket of India? **(+2, -0.25)**

a. Mansoor Ali Khan Pataudi

b. Mahendra Singh Dhoni

c. Kapil Dev

Prepp Download Prepp APP GET IT ON Google Play

d. Lala Amarnath

---

88. Which Governer-General decided that Bahadur Shah Zafar will be the last Mughal Emperor and after his death none of his desendent will be recognized as an Emperor? **(+2, -0.25)**

a. George

b. Hastings

c. Canning

d. Irwin

---

89. Who was the captain of the Indian cricket team in the inaugural world cup in 1975? **(+2, -0.25)**

a. S. Venkataraghavan

b. G.R. Vishwanath

c. Mansur Ali Khan Pataudi

d. Bishan Singh Bedi

---

90. How many hydrogen atoms are there in a molecule of methane? **(+2, -0.25)**

a. 3

b. 6

c. 2

d. 4

Prepp Download Prepp APP GET IT ON Google Play

91. Select the one which best expresses the same sentence in Passive / Active voice. **(+2, -0.25)**

We all know that there is only one God.

a. We are all known that there is only one God.

b. It is known to us all that there is only one God.

c. We have all known that there is only one God.

d. Only one God is known by us all.

---

92. Select the one which is opposite in meaning of the given word. **(+2, -0.25)**

Salient

a. Negligible

b. Prominent

c. Striking

d. Clear

Prepp Your Personal Exams Guide

---

93. Select the alternative which best express the meaning of the idiom / phrase. **(+2, -0.25)**

Rule the roost

a. To make all the decisions

b. To be prosperous but generous

c. To frequently pick a quarrel.

Prepp Download Prepp APP GET IT ON Google Play

d. To blindly follow others.

---

94. **Direction: In the sentences identify the segment which contains the grammatical error.** **(+2, -0.25)**

The number of visitors at the fair were much larger than expected.

a. The number of

b. than expected

c. visitors at the fair

d. were much larger.

---

95. Direction: **In the sentences identify the segment which contains the grammatical error.** **(+2, -0.25)**

The picture of the king's is exactly like the king himself.

a. the king himself

b. The picture

c. is exactly like

d. of the king's

---

96. Direction: **In the sentences identify the segment which contains the grammatical error.** **(+2, -0.25)**

The movie who came out yesterday was really good.

a. The movie who

Your Personal Exams Guide

Prepp Download Prepp APP GET IT ON Google Play

b. came out

c. yesterday was

d. really good

---

97. Direction: In the sentences identify the segment which contains the grammatical error. **(+2, -0.25)**

The school is with hundred yards from my house.

a. The school is

b. with hundred yards

c. from

d. my house

---

98. Select the one which best expresses the same sentence in Indirect / Direct speech. **(+2, -0.25)**

She said, "I am going to town with my father."

a. She said that she was going to town with her father.

b. She said that I am going to town with my father.

c. She said that she was going to town with my father.

d. She told that I was going to town with my father.

---

99. Direction: Read the following passage carefully and answer the questions given below them:- **(+2, -0.25)**

Prepp Download Prepp APP GET IT ON Google Play

One simple concept lies behind the formation of the stars: gravitational instability. The concept is not new. Newton first perceived it late in the 17 th century.

Imagine a uniform, static cloud of gas in space. Imagine then that the gas is somehow disturbed, so that one small spherical region becomes a little denser than the gas around it so that the small region's gravitational field becomes slightly stronger.

It now attracts more matter to it and its gravity increases further, causing it to begin to contract. As it contracts its density increases, which increases its gravity even more, so that it picks up even more matter and contracts even further.

The process continues until the small region of gas finally forms a gravitationally bound object.

The author provides information that answers which of the following questions?

I. What causes the disturbances that changes the cloud from its original static condition?

II. How does this small region's increasing density affect its gravitational field?

III. What is the end result of the gradually increasing concentration of the small region of gas?

a. only I

b. only II

c. II and III

d. I, II and III

Download Prepp APP
GET IT ON Google Play

100. **Direction: Read the following passage carefully and answer the questions given below them:-** **(+2, -0.25)**

One simple concept lies behind the formation of the stars: gravitational instability. The concept is not new. Newton first perceived it late in the 17 th century.

Imagine a uniform, static cloud of gas in space. Imagine then that the gas is somehow disturbed, so that one small spherical region becomes a little denser than the gas around it so that the small region's gravitational field becomes slightly stronger.

It now attracts more matter to it and its gravity increases further, causing it to begin to contract. As it contracts its density increases, which increases its gravity even more, so that it picks up even more matter and contracts even further.

The process continues until the small region of gas finally forms a gravitationally bound object.

The primary purpose of the passage is to

a. describe a static condition

b. support a theory considered outmoded

c. depict the successive stages of a phenomenon

d. demonstrate the evolution of the meaning of a term

Your Personal Exams Guide

Download Prepp APP GET IT ON Google Play