પ્રશ્નપુસ્તિકા ક્રમાંક

M

સમય :120 મિનિટ	Time : 120 Minutes
કુલ પ્રશ્નો : 200	Total Ques. : 200
કુલ ગુણ : 200	Total Marks : 200

This Question Booklet Contains 56 Printed Pages

ઉમેદવારનો બેઠક નંબર **Roll No:**

BVG

ઉમેદવારોને સૂચના

સૂચના ન મળે ત્યાં સુધી પ્રશ્નપુસ્તિકા ખોલવી નહીં

(1) પ્રત્યેક પ્રશ્નનો ઉત્તર A, B, C અને D પૈકી કોઈ એક છે અને ઉમેદવાર જો જવાબ ન આપવા માંગતા હોય તો તેમના માટે વિકલ્પ E OMR ઉત્તરપત્રમાં આપેલ છે. તમારે બધાજ પ્રશ્નોના ઉત્તર આપવા ફરજીયાત છે. તમારે આ સાથે **અલગ** OMR **ઉત્તરપત્રમાં જ ઉત્તર આપવાના છે.**

ઉદાહરણ તરીકે:

ભારતના રાષ્ટ્રપિતા તરીકે કોણ ઓળખાય છે?

(A) સરદાર પટેલ (B) સુભાષચંદ્ર બોઝ

(C) મહાત્મા ગાંધી (D) વિનોબા ભાવે

ઉત્તરપત્ર (OMR SHEET) માં

Ⓐ Ⓑ ● Ⓓ Ⓔ

ઉપર્યુક્ત ઉદાહરણનો જવાબ "C" છે. આથી "C" નું વર્તુળ કાળું (encode) કરેલ છે. સાચી અને ખોટી પદ્ધતિથી વર્તુળ ઘાટું કરવા બાબતની સૂચના OMR ની પાછળ આપેલ છે જેની નોંધ લેવી

(2) આ પાના ઉપર આપનો રોલ નંબર લખો.

(3) બધા જ પ્રશ્નો પૂરેપૂરા છપાયેલા છે કે કેમ તેની પ્રથમ ખાતરી કરી લો. જો પ્રશ્નો પૂરા છપાયા ન હોય અથવા કોઈ પૃષ્ઠ ફાટેલું હોય કે કોઈ પૃષ્ઠ સામેલ ન હોય અથવા તો અન્ય કોઈ ક્ષતિ જણાય તો તરત જ પ્રશ્નપુસ્તિકા નિરીક્ષક પાસેથી અચૂક બદલાવી લેવી.

ઉમેદવારને OMR ઉત્તરપત્ર મળ્યા બાદ જો તેઓ દ્વારા તેનો નાશ કરવામાં આવશે કે ગુમ કરવામાં આવશે તો તે ઉમેદવાર ગેરલાયક ઠેરાવવામાં આવશે તેમજ ભવિષ્યની પરીક્ષાઓમાં બેસવા માટે પ્રતિબંધ મુકવા ઉપરાંત ફોજદારી ગુનાને પણ પાત્ર બનશે.

(4) પરીક્ષા શરૂ થયેથી પૂરી થાય તે દરમ્યાન ઉમેદવાર પરીક્ષાર્થીએ પરીક્ષાખંડ છોડવાની મનાઈ છે.

(5) ઉમેદવારે પોતાના બેઠક ક્રમાંકની પ્રશ્નપુસ્તિકા અને OMR ઉત્તરપત્ર મળેલ છે તેની ખાતરી કરી લેવી અન્યથા ખંડ નિરીક્ષકનું તરત જ ધ્યાન દોરવું. ઉમેદવારને OMR ઉત્તરપત્ર મળે કે તરત જ તેમાં નિયત કરેલ જગ્યાએ પોતાનો બેઠક નંબર સ્વચ્છ અક્ષરે લખવાનો રહેશે. તેમજ બેઠક ક્રમાંક નીચે આપેલ વર્તુળ પણ ઘાટું કરવાનું રહેશે. મળેલ પ્રશ્નપત્રની સીરીઝ નિયત જગ્યાએ લખીને તેની નીચે તે સીરીઝ સામે આપેલ વર્તુળ પણ ઘાટું કરવાનું રહેશે. લખેલી વિગતો અને ઘાટું કરેલ વર્તુળની વિગતો યોગ્ય રીતે ભરાયેલ છે તેની ખાતરી કરી લેવી.

(6) પ્રત્યેક સાચા જવાબદીઠ 1 (એક) ગુણ મળવાપાત્ર થશે. આયોગ દ્વારા ગુણાંકન પદ્ધતિમાં માઈનસ પદ્ધતિ દાખલ કરવામાં આવી છે. જે મુજબ-

(i) પ્રત્યેક ખોટા જવાબદીઠ, ખાલી છોડેલ જવાબદીઠ તથા છેકછાક, ખોટી પદ્ધતિથી એક કરતાં વધુ વિકલ્પ દર્શાવેલ જવાબદીઠ 0.3 ગુણ કાપવામાં આવશે. પરંતુ જો ઉમેદવાર જવાબ આપવા માંગતા ન હોય અને વિકલ્પ (E) ઘાટું કરશે તો 0.3 ગુણ કાપવામાં આવશે નહીં.

(ii) આન્સર કી ફાઈનલ કરતી વખતે જો આયોગ દ્વારા એક પ્રશ્નના એકથી વધુ વિકલ્પો સાચા છે તેમ જાહેર કરવામાં આવે ત્યારે સાચા વિકલ્પ પૈકી કોઈપણ જવાબ માટે એક (1) ગુણ મળવાપાત્ર થશે.

(7) OMR ઉત્તરપત્રમાં નિશ્ચિત જગ્યા સિવાય ઉમેદવારે પોતાનો બેઠક ક્રમાંક લખવો નહીં તથા પોતાની ઓળખ છતી થાય તેવી નામ સહિતની અન્ય કોઈ પણ પ્રકારની નિશાની કરવાની સખત મનાઈ છે. તેમ છતાં પણ કોઈ પણ નિશાની કે ઓળખ માલૂમ પડશે તો તેને સંપૂર્ણ ગેરશિસ્ત ગણવામાં આવશે અને પરીક્ષા માટે ગેરલાયક ગણવામાં આવશે.

(8) OMR ઉત્તરપત્રના પ્રમાણપત્રમાં ઉમેદવાર તથા નિરીક્ષક બંનેની વાદળી / કાળી બોલપોઈન્ટ પેનથી સહી તથા ઉમેદવારના ડાબા હાથના અંગુઠાનું નિશાન ફરજિયાત છે. ઉમેદવારની સહી તથા ડાબા હાથના અંગુઠાના નિશાન વિનાની OMR ઉત્તરપત્રવાળા ઉમેદવાર ગેરલાયક ઠરશે.

(9) પરીક્ષા દરમ્યાન ઉમેદવાર પાસેથી કોઈ પણ સાહિત્ય, ગાઇડ, માર્ગદર્શિકા, કાપલી, સ્લીપો, અન્ય હસ્તલિખિત કે પ્રિન્ટેડ સાહિત્ય, મોબાઇલ ફોન, પેજર, કેલ્ક્યુલેટર કે અન્ય વીજાણુ ઉપકરણો હોવાનું જણાશે તો ઉમેદવારને ગેરલાયક ગણવામાં આવશે. તેમજ ભવિષ્યની પરીક્ષાઓમાં બેસવા માટે પ્રતિબંધ મુકવા પણ પગલાં લેવાશે.

(10) ચાલુ પરીક્ષા દરમ્યાન અંદરોઅંદર ગુસપુસ કરવી, અવાજ કરવો કે નિરીક્ષકની સૂચનાઓનું ઉલ્લંઘન કરવું તે ગેરશિસ્ત ગણાશે. કોઇ પણ પ્રકારની ગેરશિસ્ત બદલ પગલા લેવાશે.

(11) ઉમેદવારે વાદળી / કાળી બોલપોઈન્ટ પેનથી ઉત્તરો લખવાના છે. અન્ય શાહી કે પેન કે પેન્સિલ તથા સફેદ શાહીનો ઉપયોગ કરી શકશે નહીં તથા સફેદ શાહી (White Ink), બ્લેડ કે રબ્બરથી કે અન્ય કોઈ પણ રીતે કરેલા સુધારા માન્ય ગણાશે નહીં.

(12) આ જવાબવહી કમ્પ્યુટર દ્વારા તપાસવાની હોવાથી તે વળે, ફાટે કે બગડે નહીં તેની ખાસ કાળજી રાખવી તથા જવાબ વહીની ઘડી વાળવી નહીં.

(13) પ્રશ્નપુસ્તિકામાં કોરી જગ્યામાં રફકામ કરવું. તે માટે અલગ કાગળ આપવામાં આવશે નહીં. જવાબવહી માં કઈ પણ રફવર્ક કરવું નહીં. પ્રશ્નપુસ્તિકામાં જવાબો લખવાની મનાઈ છે. પરીક્ષાખંડ છોડતા પૂર્વે જવાબવહી (OMR Answer Sheet) નિરીક્ષકને સોંપવી, જ્યારે પ્રશ્નપુસ્તિકા ઉમેદવારો લઈ જઈ શકશે.

પરીક્ષા પૂરી થયા બાદ OMR ઉત્તરપત્ર વર્ગ નિરીક્ષકને સોંપ્યા બાદ જ વર્ગખંડ છોડવાનો રહેશે. તેમ કરવામાં કસૂર થયેથી ઉમેદવારને ગેરલાયક ઠેરવવામાં આવશે. તે ભવિષ્યની પરીક્ષાઓમાં બેસવા માટે પ્રતિબંધ મૂકવા તથા ફોજદારી પગલા લેવાને પણ પાત્ર થશે.

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1. In a 2-ton coal-fired boiler, the hourly consumption of coal is 500 kg. The ash content of the coal is 2%. Calorific value of coal is 2400 GCV. What is the amount of ash formed per day if the boiler operates 24 hours per day?

(A) 480 kg
(B) 240 kg
(C) 120 kg
(D) 10 kg

2. Which one of the following slag components is responsible for the oxidizing power of steelmaking slags?

(A) FeO
(B) SiO_2
(C) CaO
(D) MgO

3. The vortex shedding meter is primarily used for measuring

(A) Fluid Level
(B) Fluid Temperature Range
(C) Fluid Flow Rate
(D) Fluid Pressure Range

4. In the manufacture of polyvinyl chloride (PVC) from ethylene and chlorine, what is the right reaction sequence?

(A) Polymerization---Pyrolysis---Chlorination
(B) Chlorination---Pyrolysis---Polymerization
(C) Chlorination---Polymerization---Pyrolysis
(D) Polymerization---Chlorination---Pyrolysis

5. A wastewater stream of 1 kilolitre containing 100 ppm of phenol is passed through an adsorbent column. Total weight of dry adsorbent in adsorbent column is 0.5 kg in post adsorption process. If the residual concentration of phenol in the wastewater is 10 ppm phenol, the amount of phenol adsorbed (in grams per kg of dry adsorbent) is

(A) 90
(B) 180
(C) 360
(D) 900

6. Which mode of heat transfer dominates in fire spread across open space?

(A) Conduction
(B) Convection
(C) Radiation
(D) Advection

[Contd.

7. Flashover typically occurs when compartment temperature reaches_____

(A) 100 – 200°C

(B) 300 – 400°C

(C) 500 – 600°C

(D) 900 – 1000°C

8. While conducting fire risk assessments and designing fire exit, which of the following parameters should be considered?

(A) Available Safe Egress Time (ASET)

(B) Required Safe Egress Time (RSET)

(C) Both (A) & (B)

(D) None of the above

9. For fire scenario, when a wooden furniture burns at a mass loss rate of 0.10 kg/s, the effective heat of combustion of wood is 16 MJ/kg. What is the Heat Release Rate (HRR) in kW?

(A) 800

(B) 1200

(C) 2000

(D) 1600

10. In an oil fire, fire fighter uses 3% foam solution. If the fire is extinguished within 30 minutes, a foam system uses foam solution at the rate of 100 litre/min. What should be the consumption of foam solution?

(A) 300 litres

(B) 1200 litres

(C) 900 litres

(D) 3000 litres

11. An auditorium measuring 50 m $\times$ 20 m $\times$ 4 m is being assessed to determine the Available Safe Egress Time (ASET) during a fire. In case fire smoke accumulates at a rate of 5 m^3/s, estimate the time required for the smoke to fill the upper 1 m layer of the compartment.

(A) 250 seconds

(B) 800 seconds

(C) 500 seconds

(D) 200 seconds

12. As per the United Nations agenda for sustainable development, the number of Sustainable Development Goals (SDGs) are _____ and the proposed target year to achieve them is _____.

(A) 13, 2030
(B) 17, 2050
(C) 17, 2030
(D) 13, 2050

13. Why green ammonia is better than conventional (grey) ammonia?

(A) Produces hydrogen by splitting water by electrolysis
(B) It has lower lifecycle greenhouse gas emissions.
(C) Extracting nitrogen directly from the atmosphere
(D) All of the above

14. Which of the following statements are correct?

(i) For any gas, a place in which an explosive atmosphere is likely to occur in normal operation occasionally is defined as Zone 21.
(ii) For any gas, a place in which an explosive atmosphere is likely to occur in normal operation occasionally is defined as Zone 1.
(iii) For any dust, a place in which an explosive atmosphere is likely to occur in normal operation occasionally is defined as Zone 21.
(iv) For any dust, a place in which an explosive atmosphere is likely to occur in normal operation occasionally is defined as Zone 1.

(A) (i) and (ii)
(B) (ii) and (iii)
(C) (i) and (iv)
(D) (ii) and (iv)

15. Which of the following statements are correct?

(i) Equipment with ATEX Category 1G is suitable for Zone 0,1,2.
(ii) Equipment with ATEX Category 1D is suitable for Zone 20,21,22.
(iii) Equipment with ATEX Category 1G is suitable for Zone 20,21,22.
(iv) Equipment with ATEX Category 1D is suitable for Zone 0,1,2.

(A) (i) and (ii)
(B) (ii) and (iii)
(C) (i) and (iv)
(D) (ii) and (iv)

[Contd.

16. An NFPA diamond shows: Blue = 0, Red = 4, Yellow = 1. Which storage precaution is most important?

(A) Prevents contact with skin only

(B) Keeps away from ignition sources

(C) Stores under water

(D) Shields from radiation

17. Which of the following statements are correct?

(i) A low energy electrical discharge results from a localized electrical breakdown of gases near sharp conductive edges.

(ii) A high energy electrical discharge results from a localized electrical breakdown of gases near sharp conductive edges.

(iii) A higher energy form of corona discharge is characterized by low-frequency, bursts or by streamers, which can form between charged non-conductive surfaces and grounded conductors.

(A) (i) only

(B) (ii) and (iii)

(C) (i) and (ii)

(D) (i) and (iii)

18. As per excavation work code of safety IS 3764:1992, what is a minimum requirement of placing ladder in excavation?

(A) At least one ladder per 15 m of length or fraction thereof in case of hazardous work

(B) At least one ladder per 30 m of length or fraction thereof in case of hazardous work

(C) At least one ladder per 20 m of length or fraction thereof in case of hazardous work

(D) At least one ladder per 25 m of length or fraction thereof in case of hazardous work

19. As per GHS labelling practice, which signal word is used for less severe GHS hazard?

(A) Danger

(B) Warning

(C) Caution

(D) Attention

20. Which of the following statements are correct for SIL (Safety Integrity Level)?

(i) Higher the SIL, lower the average frequency of dangerous failure causing a hazardous event.

(ii) SIL level 1 stands for highest level of safety integrity.

(iii) No safety instrumented function with a safety integrity level higher than that associated with SIL 4 shall be allocated to a safety instrumented system.

(A) (i) and (ii)
(B) (iii) and (ii)
(C) (i) and (iii)
(D) All of the above

21. In Fault Tree analysis, a top event occurs if either Event A or Event B occurs. Probability for Event A and Event B is; P(A) = 0.02 & P(B) = 0.03. Assuming independence, top event probability equals _____.

(A) 0.0500
(B) 0.0494
(C) 0.0600
(D) 0.0006

22. For Bow-Tie Analysis, which of the following statements is/are TRUE?

(i) Barriers on the left side mitigate consequences.

(ii) Barriers on the right side prevent threats.

(iii) Preventive barriers are placed before the top event.

(iv) Recovery measures are considered initiating events.

(A) Only (iii)
(B) Only (i)
(C) (i) and (ii)
(D) All of the above

23. What is the minimum threshold limit of employment of workers in factories for applicability of the Gujarat Physically Handicapped Persons (Employment in Factories) Act, 1982?

(A) Factories employing 500 or more workers working on any day of immediately preceding the twelve months

(B) Factories employing 200 or more workers working on any day of immediately preceding the twelve months

(C) Factories employing 400 or more workers working on any day of immediately preceding the twelve months

(D) Factories employing 100 or more workers working on any day of immediately preceding the twelve months

24. What is the function of NRV in gas cutting set in hot work activity?

(A) Contains flame arresting element

(B) Contains thermal and/or pressure shut off

(C) Stops reverse gas flow

(D) All of the above

25. For flammable non-toxic gas cylinder, what is the threshold storage limit above which license is required for storage?

(A) 20 cylinders or 200 kg whichever is less

(B) 25 cylinders or 200 kg whichever is less

(C) 5 cylinders

(D) None of the above

26. A Self-Contained Breathing Apparatus (SCBA) with a gas cylinder of 6 litres water capacity and a pressure of 300 bar is used by firefighters. If the average air consumption rate is 40 liters per minute, calculate the total safe usage duration of the cylinder, considering a safety margin of 10 minutes.

(A) 45 minutes

(B) 35 minutes

(C) 40 minutes

(D) 30 minutes

27. A worker accidentally touches a 230 V conductor while standing on ground. His body resistance is 1000 Ω. Neglecting all other resistances, the current passing through the body will be_____

(A) 230 mA

(B) 230 A

(C) 23 A

(D) 23 mA

28. The primary purpose of "Try-Out" after lockout is to _____

(A) Measure insulation resistance

(B) Confirm zero energy

(C) Verify grounding

(D) All of the above

29. A thermal energy released during arc flash depends on

(A) Incident energy directly proportional to arc duration

(B) Incident energy inversely proportional to working distance

(C) Protective device characteristics

(D) All of the above

30. An earth resistance suddenly increases from 1 Ω to 10 Ω. What will be the consequences?

(A) Increased touch voltage

(B) Lower fault current

(C) Both (A) and (B)

(D) None of the above

31. A 1000 μF capacitor is connected across a 20 kΩ discharge resistor. The RC time constant is_____

(A) 2 seconds

(B) 20 seconds

(C) 10 seconds

(D) 1 second

32. Which stored energy remains even after electrical isolation of an oil-filled transformer?

(A) Thermal energy in hot oil

(B) Residual magnetic energy

(C) Pressurized cooling system

(D) All of the above

33. A 1000 kVA transformer has 4% impedance. The available short-circuit current at rated current is approximately

(A) 25 times rated current

(B) 15 times rated current

(C) 10 times rated current

(D) 5 times rated current

34. Which protection acts mainly during severe internal faults producing gas inside an oil-filled transformer?

(A) Differential relay

(B) Buchholz relay

(C) Overcurrent relay

(D) Distance relay

[Contd.

35. A boiler drum has a Maximum Allowable Working Pressure (MAWP) of 40 bar. Hydrotest pressure (ASME practice) is closest to

(A) 40 bar (B) 60 bar

(C) 80 bar (D) 50 bar

36. A grinding wheel rated for 6,000 rpm is installed on a grinder machine having a no-load speed of 6,500 rpm. Which among the following statements is true?

(A) It is safe to use because speed reduces under load

(B) Only safe for short duration of operation

(C) Unsafe because wheel burst may occur

(D) None of the above

37. Which of the following statements is correct in case of distillation of peroxide forming solvents?

(A) Never be boiled completely dry

(B) Before distillation, conduct quantitative peroxide test

(C) Distillation shall be performed in GLR (Glass Line Reactor)

(D) All of the above

38. During HAZOP, the deviation high pressure is identified for a distillation column. Which of the following is the MOST likely cause?

(A) Low feed temperature (B) Condenser failure

(C) Increased reflux (D) All of the above

39. Which of the following statements correctly describes the relationship between HAZOP and LOPA?

(A) LOPA can replace HAZOP

(B) LOPA is conducted before HAZOP

(C) HAZOP calculates SIL

(D) None of the above

40. A new solvent is introduced into an existing process. Before implementation, which PSM (Process Safety Management) activity shall be considered?

(i) Review and update PHA (Process Hazard Analysis).

(ii) Follow MOC (Management of Change) process.

(iii) Conduct Training of Operators.

(iv) Update process safety information.

(A) (i), (ii) and (iv) (B) (i), (ii) and (iii)

(C) (ii), (iii) and (iv) (D) All of the above

41. Which of the following regulatory frameworks has been notified under powers derived from the Environment (Protection) Act, 1986?

(i) Coastal Regulation Zone (CRZ) Notifications.

(ii) Solid Waste Management Rules, 2016.

(iii) E-Waste (Management) Rules.

(iv) Bio-Medical Waste Management Rules, 2016.

(A) (i), (ii) and (iv) (B) (i), (ii) and (iii)

(C) (ii), (iii) and (iv) (D) All of the above

42. As per IS 3786:2022, which of the following are correct statements?

(i) Manhour calculated from payroll excluding overtime.

(ii) Loss of both hand and foot have equivalent man-day loss of 6000.

(iii) For incident rate, calculations shall include injuries which occurred during the period, together with any injuries which occurred in the previous 12 months, and which have not already been included in earlier calculations.

(A) (i) and (ii) (B) (i) and (iii)

(C) (ii) and (iii) (D) All of the above

43. Coal dust generated at the furnace, boiler and coal handling work may cause coal workers' pneumoconiosis, this is known as_____

(A) Anthracosis (B) Brown-lung disease

(C) Siderosis (D) Baker's lung

44. In the Gujarat Factories (Occupational Health & Safety Audit) Rules 2025, which type of categories of factories are given for safety audit?

(A) Category I Factories
(B) Category II Factories
(C) Category III Factories
(D) All of the above

45. What type of pollution is primarily targeted by Gujarat's cap-and-trade programme?

(A) Particulate matter (PM)
(B) Nitrogen dioxide (NO_2)
(C) Carbon dioxide (CO_2)
(D) Methane (CH_4)

46. Which of the following is/are the examples of cleaner production?

(A) Advanced biological treatment followed by activated carbon adsorption of wastewater
(B) Reduce waste to landfill
(C) Integration of renewable energy sources
(D) All of the above

47. Which of the following is/are not the function of state crisis group?

(A) Review on-site emergency plan of major accidental hazard installation
(B) Publish a list of experts who are concerned with the management of chemical accident
(C) Continuously monitor post-accident situation arising out of the major chemical accident at site
(D) All of the above

48. According to Chemical Accident (Emergency Planning, Preparedness and Response) Rules,1996, which of the following are correct statements?

(i) State crisis group shall meet at least once in three months.
(ii) Central crisis group shall meet at least once in a year.
(iii) District crisis group shall meet every forty-five days.
(iv) Central crisis group shall meet at least once in six months.

(A) (i), (ii) and (iii)
(B) (i), (iii) and (iv)
(C) (ii), (iii) and (iv)
(D) Only (i) and (ii)

49. According to Chemical Accident (Emergency Planning, Preparedness and Response) Rules, 1996, 'Hazardous Chemical' means

(i) Any chemical listed in Column 2 of Schedule 2

(ii) Any chemical listed in Column 2 of Schedule 3

(iii) Any chemical which satisfies characteristic/criteria of Part II of Schedule 1

(A) (i) and (ii)
(B) (i) and (iii)
(C) (ii) and (iii)
(D) All of the above

50. An electrician is assigned to inspect a 415 V MCC while it is energized. The incident energy at the working distance is calculated as 38 cal/cm^2. Which PPE category as per NFPA 70E is the MINIMUM appropriate?

(A) Category 1
(B) Category 2
(C) Category 3
(D) Category 4

51. Which equipment is MOST susceptible to overheating due to harmonics?

(A) Transformer
(B) Isolator
(C) Fuse
(D) Earth pit

52. When a 30 kN load is lifted by two symmetric slings at an angle of 60° to the vertical, the vertical lifting forces split resulting in a tension force equal to _____ on each individual leg.

(A) 30 kN
(B) 20 kN
(C) 10 kN
(D) 15 kN

53. As per safety criteria and inspection procedure of wire rope sling, which among the following statements are true?

(i) If the total number of visible broken wires in any length of six rope diameters exceeds 5% of the number of wires in the rope, the sling shall be withdrawn from service.

(ii) If surface wear reduces the measured diameter of the rope at any point to less than 90% of the nominal diameter, the sling shall be discarded.

(iii) Wire rope shall be thoroughly examined by a competent person at least once in every six months.

(A) (i) and (iii)
(B) (ii) and (iii)
(C) (i) and (ii)
(D) All of the above

54. A reactor contains gas at 5 bar(g) and 100°C. Due to uncontrolled heating, the temperature increases to 200°C while volume remains constant. Assuming ideal gas behaviour, the final absolute pressure is approximately

(A) 6.1 bar
(B) 7.2 bar
(C) 7.6 bar
(D) 6.7 bar

55. What are the reasons of installing rupture disc on upstream of PSV (Pressure Safety Valve)?

(i) Protects the PSV from corrosive or fouling service.

(ii) Improves reliability of PSV.

(iii) To set at higher than maximum allowable working pressure.

(iv) To achieve optimal leak tightness.

(A) (i), (ii) and (iii)
(B) (i), (ii) and (iv)
(C) (ii), (iii) and (iv)
(D) All of the above

56. During industrial radiography, the dose rate measured at 2 m from a point source is 18 mSv/h. Assuming no shielding at 6 m, calculate approximate dose rate using inverse square law?

(A) 1 mSv/h
(B) 5 mSv/h
(C) 10 mSv/h
(D) 2 mSv/h

57. Which radioactive isotope is most commonly used for industrial gamma radiography of thick steel welds?

(A) Carbon-14
(B) Iridium-192
(C) Iodine-131
(D) Tritium

58. Which device records an individual's cumulative radiation exposure?

(A) Thermoluminescent Dosimeter (TLD) Badge

(B) Clamp Meter

(C) Gamma-Ray Cameras

(D) Computed Tomography (CT) Systems

59. Which equipment presents the highest risk of Hand–Arm Vibration Syndrome (HAVS)?

(A) Bench grinder
(B) Pneumatic jackhammer
(C) Gas-cutting-torch
(D) Electric winch

60. Which of the following statements are true for scaffolding?

(i) Transform is a vertical or near vertical member used in the construction of scaffold for transmitting the load to the foundation.

(ii) Ledger is a horizontal member which ties the standard at right angles and which may support putlogs and transoms.

(iii) Standard is a vertical or near vertical member used in the construction of scaffold for transmitting the load to the foundation.

(iv) Transform is a scaffold member spanning from ledger to ledger or from ledger/ standard to a building and upon which the platform rests.

(A) (i), (ii) and (iii)
(B) (i), (iii) and (iv)
(C) (ii), (iii) and (iv)
(D) All of the above

61. Which of the following statement are true for Boatswain's Chairs?

(i) The seat should be not less than 30 mm thick and should not be more than 600 mm long and 300 mm wide.

(ii) The test will be made by raising the working surface 300 mm above the ground and loading it with at least two times the maximum weight that will be imposed upon it.

(iii) Suspenders shall be not less than 50 mm manila ropes or steel wire rope of not less than 10 mm diameter.

(A) (i) and (iii)
(B) (i) and (ii)
(C) (ii) and (iii)
(D) All of the above

62. According to IS 3696 Part 2 Scaffolding and Ladders-Code of Safety, which among the following categories of ladders are covered?

(i) Rope ladders

(ii) Extension ladders

(iii) Stock ladders

(iv) Trestle ladders

(A) (i), (ii) and (iii)
(B) (i), (ii) and (iv)
(C) (ii), (iii) and (iv)
(D) All of the above

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63. According to IS 3696 Part 2 Scaffolding and Ladders-Code of Safety, which among the following statements are correct?

(i) Ladders leading to landings or walkways shall extend at least one foot above the landing and shall be secured at the upper end.

(ii) No ladder having a missing, defective rung or one which depends for its support solely on nails, shall be used.

(iii) The pitch at which a lean-to-ladder is used, shall be such that the horizontal distance of its foot from the vertical plane of its top shall be not more than one quarter of its length.

(A) (i) and (iii)
(B) (i) and (ii)
(C) (ii) and (iii)
(D) All of the above

64. What should be permissible with respect to gas testing before issuing work permit?

(A) Oxygen content more than 19.5%, Hydrocarbon – less than 5%, Toxic gas content zero

(B) Oxygen content more than 21%, Hydrocarbon – zero, Toxic gas content below TLV

(C) Oxygen content more than 19.5%, Hydrocarbon – zero, Toxic gas content below TLV

(D) Oxygen content more than 21%, Hydrocarbon – below TLV, Toxic gas content zero

65. Which polymer property is most important for preventing static charge accumulation in explosive dust handling?

(A) Density
(B) Surface resistivity
(C) Surface hardness
(D) All of the above

66. Which polymer is preferred for chemical splash shields because of excellent impact resistance?

(A) Polycarbonate
(B) Polystyrene
(C) Acrylic
(D) Phenolic Resin

67. A laboratory viewing window is exposed to sudden cooling from 300°C. Which glass provides maximum thermal shock resistance and why?

(A) Soda lime glass due to high thermal expansion coefficient

(B) Borosilicate glass due to low thermal expansion coefficient

(C) Float glass due to low thermal expansion coefficient

(D) Lead glass due to high thermal expansion coefficient

68. Hot rolled medium and high tensile structural steel has nine grades of steel. Subqualities A, BR, BO and C indicate requirement of impact test and mode of deoxidation. Which of the below statements are correct?

(i) A: Impact test not required, processed as semi-killed/killed steel

(ii) BR: Impact test optional; if required at room temperature; processed as semi-killed/ killed steel

(iii) Impact test mandatory at 0°C; processed as semi-killed/ killed steel

(iv) Impact test mandatory at –20°C; processed as semi-killed/ killed steel

(A) (i), (ii) and (iii)

(B) (i), (ii) and (iv)

(C) (ii), (iii) and (iv)

(D) All of the above

69. A crane lifts a 10,000 kg load vertically upward at a constant speed of 2 m/s. Consider $g = 9.81\ m/s^2$. The minimum power required is _____.

(A) 196.2 kW

(B) 98.10 kW

(C) 20.38 kW

(D) 0.51 kW

70. What is the effect of catalyst in an equilibrium reaction?

(A) Changes equilibrium constant

(B) Increases product yield

(C) Speeds both forward and reverse reactions equally

(D) Shifts equilibrium towards products

71. Referring to chemical compatibility, which among the below is not suitable for storage together in one room?

(i) H_2O_2 and Methanol.

(ii) Caustic (NaOH) and Ammonium salts (NH_4Cl).

(iii) Sodium sulphate and Potassium sulphate.

(iv) Nitric acid and Sodium cyanide.

(A) (i), (ii) and (iii)
(B) (i), (ii) and (iv)
(C) (ii), (iii) and (iv)
(D) All of the above

72. Two resistors of 6 Ω and 3 Ω are connected in parallel across a 12 V source. The total current drawn is _____.

(A) 2A
(B) 4A
(C) 6A
(D) 8A

73. Which gas law explains pressure increase inside a sealed cylinder during fire exposure?

(A) Boyle's Law
(B) Charles' Law
(C) Gay-Lussac's Law
(D) Dalton's Law

74. For leak of gases from large storage tank, under which atmospheric stability condition (Pasquill-Gifford classes) is the highest ground-level concentration generally expected at a fixed downwind distance?

(A) Highly unstable atmosphere (Class A)

(B) Neutral atmosphere (Class D)

(C) Very stable atmosphere (Class F)

(D) Thunderstorm conditions

75. A bund encloses: Tank A = 6,000 m^3, Tank B = 4,500 m^3 and Tank C = 3,000 m^3 .What should be the minimum capacity of bund?

(A) 6,600 m^3
(B) 14,850 m^3
(C) 3,375 m^3
(D) 13,500 m^3

76. After maintenance, a batch reactor was started with the cooling water supply valve unintentionally left closed. The loss of cooling caused a rapid temperature rise, leading to reactor vessel rupture within 15 minutes. Identify the Safety Management System (SMS) deficiencies that may have contributed to the incident and could be considered the root causes?

(A) Work Permit System
(B) Pre-Start up Safety Review
(C) Operating Procedure
(D) All of the above

77. As an outcome of an incident investigation, route causes were identified. Which of the following are true?

(i) HAZOP or JSA is not conducted and identified as human factor.
(ii) Confined-space work started without gas testing or authorisation identified as system factor.
(iii) Shift handover omitted information that a pipeline remained pressurized as human factor.

(A) (i) and (iii)
(B) (ii) and (iii)
(C) (i) and (ii)
(D) All of the above

78. A centrifugal pump handling acetone begins cavitating. Which action is MOST effective?

(A) Increases suction pipe losses
(B) Increases net positive suction head available
(C) Increases discharge valve restriction
(D) Reduces pump diameter

79. As per Schedule IV of the Code on Social Security, 2020, which of the following injuries deemed to result in total disablement?

(i) Very severe facial disfigurement.
(ii) Absolute deafness.
(iii) Loss of a hand and a foot.
(iv) Amputation through shoulder joint.

(A) (i), (ii) and (iii)
(B) (ii), (iii) and (iv)
(C) (i), (ii) and (iv)
(D) All of the above

80. As per the Code on Social Security, 2020, which of the following statements are true in case of maternity benefit?

(i) No woman shall work in any establishment during the six weeks immediately following the day of her delivery, miscarriage or medical termination of pregnancy.

(ii) Woman shall be entitled to maternity benefit unless she has actually worked in an establishment of employer from whom she claims maternity benefit for a period of not less than 70 days in the twelve months immediately proceeding the date of her expected delivery.

(iii) The maximum period for which any woman shall be entitled to maternity benefit shall be twenty-six weeks.

(A) (i) and (ii)
(B) (i) and (iii)
(C) (ii) and (iii)
(D) All of the above

81. As per Section 67 of the Code on Social Security, 2020, at what employee threshold is a crèche facility required to be provided and how many visits per day is a woman employee permitted to make to the crèche?

(A) 50 employees and unlimited visits
(B) 50 employees and four visits
(C) 20 employees and unlimited visits
(D) 20 employees and four visits

82. Employer shall not be liable for compensation payment in respect of injury not resulting in death or permanent total disablement caused by an accident which is directly attributable to_____.

(i) The employee having been at the time there of under the influence of drink or drugs.

(ii) The employee who has not undergone safety induction training.

(iii) The wilful disobedience of the employee to an order expressly given or rules expressly framed for the purpose of securing the safety of employees.

(iv) The wilful removal of safety guards which he knew to have been provided for the purpose of securing the safety of employee.

(A) (i), (ii) and (iii)
(B) (i), (ii) and (iv)
(C) (i), (iii) and (iv)
(D) All of the above

83. In a Belt & Pully system, motor pully diameter is 100 mm and RPM is 1450. If driven pully diameter is 250 mm, find the driven pully RPM.

(A) 680 RPM
(B) 560 RPM
(C) 580 RPM
(D) 650 RPM

84. 17 SDG goals were established by United Nations on various themes. Which among the following is correct?

(i) SDG 3: Good Health and Well Being
(ii) SDG 6: Clean Water and Sanitation
(iii) SDG 7: Affordable and Clean Energy
(iv) SDG 4: Climate Action

(A) (i), (ii) and (iii)
(B) (i), (iii) and (iv)
(C) (ii), (iii) and (iv)
(D) All of the above

85. Which section empowers the Central Government to take measures to protect and improve environmental quality?

(A) Section 2
(B) Section 3
(C) Section 7
(D) Section 15

86. Under Section 24 of Environment (Protection) Act, if there is inconsistency between this Act and another law,_____.

(A) Other law prevails
(B) State law prevails
(C) EPA prevails, subject to specified provisions
(D) Judicial decision prevails

87. As per Environment (Protection) Rule, which of the following statements are correct?

(i) Schedule VI contains General Standards for Discharge of Environmental Pollutants.
(ii) SPCB may prescribe stricter limits than Schedule VI.
(iii) NGT may prescribe stricter limits than Schedule VI.

(A) (i) and (iii)
(B) (ii) and (iii)
(C) (i) and (ii)
(D) All of the above

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88. Under which form and what time limit must the Environmental Statement be submitted to the concerned State Pollution Control Board according to Rule 14 of the Environment (Protection) Rules?

(A) Form IV, before 30th September

(B) Form V, before 30th September

(C) Form IV, before 30th July

(D) Form V, before 30th July

89. What is the prescribed frequency for submitting the Register of Physically Handicapped Workers (Form II) to the Chief Inspector of Factories?

(A) Half yearly

(B) Yearly

(C) Quarterly

(D) Bimonthly

90. The occupier shall ensure that a mock drill of the on-site emergency plan is conducted every ____.

(A) Year

(B) Six months

(C) Quarter

(D) None of the above

91. As per the Gujarat Occupational Safety, Health & Working Conditions Rules, 2025, who shall be the members of state occupational safety and health advisory board?

(A) Member secretary – Gujarat Pollution Control Board

(B) Gujarat Real Estate Regulatory Authority

(C) Chief inspector-cum-Facilitator of factories

(D) All of the above

92. As per The Gujarat Occupational Safety, Health & Working Conditions Rules, 2025, what shall be the duties of employees?

(A) No employee shall sleep while on duty

(B) No employee shall consume any intoxicating substance while on duty

(C) No employee shall remove or pass through any fence, barrier or gate

(D) All of the above

93. As per the Gujarat Occupational Safety, Health & Working Conditions Rules, 2025, for annual health examination, which of the following statements are true?

(i) Medical examination shall be conducted free of cost to employees.

(ii) Medical certificate shall be required to submit to employer and employee.

(iii) Medical examination shall be conducted for every employee/worker who has completed 45 years of age.

(A) (i) and (iii)
(B) (ii) and (iii)
(C) (i) and (ii)
(D) All of the above

94. As per the Gujarat Occupational Safety, Health & Working Conditions Rules, 2025, requirement to form safety committee, which of the following statements are true?

(i) Every major accident hazard factory irrespective of number of workers employed.

(ii) Factory carrying hazardous process & dangerous operation wherein 50 workers or more employed.

(iii) Factory carrying hazardous process & dangerous operation wherein 250 workers or more employed.

(iv) Factory wherein 250 or more workers ordinarily employed.

(A) (i) (ii) and (iii)
(B) (ii) (iii) and (iv)
(C) (i) (ii) and (iv)
(D) (i), (iii) and (iv)

95. Which among the following shall be the agenda of safety committee meeting?

(i) Potential safety & health hazard

(ii) Data of accident

(iii) Data of working environment monitoring.

(iv) Report of factory inspector visit and its compliance status.

(A) (i), (ii) and (iii)
(B) (ii), (iii) and (iv)
(C) (i), (ii) and (iv)
(D) All of the above

96. As per the Gujarat Occupational Safety, Health & Working Conditions Rules, 2025, what shall be the mandatory requirement of appointing a Safety Officer?

(A) In major accidental hazard unit, 1 Safety Officer for 100 to 500 workers

(B) In ordinary factories, 1 Safety Officer for 250 to 1000 workers

(C) In factory carrying hazardous process, 1 Safety Officer for 500 to 1500 workers

(D) All of the above

97. As per the Gujarat Occupational Safety, Health & Working Conditions Rules, 2025, what shall not be the duties of a Safety Officer?

(A) To investigate selected accidents

(B) To design and conduct training programs for prevention of personal injuries

(C) To conduct election of workers' representatives on safety committee

(D) To conduct elections of the workers for the appointment of workers' representatives on safety committee where there is no recognized union of the workers

98. As per the Gujarat Occupational Safety, Health & Working Conditions Rules, 2025, which among the following statements are true with respect to maintenance of register, record and returns?

(i) Maintain overtime and wages register as per Form 13 and preserve it for a period of 3 calendar years.

(ii) Manager shall provide identity card with photographs in Form 18 free of cost.

(iii) Maintain register of all accidents and dangerous occurrence in Form 21.

(A) (i) and (iii)

(B) (ii) and (iii)

(C) (i) and (ii)

(D) All of the above

99. As per the Gujarat Occupational Safety, Health & Working Conditions Rules, 2025, which of the following conditions shall be met for employment of women during night?

(A) Transport facility to pick up and drop from her residence

(B) Comply with the provisions of the Sexual Harassment of Women at Workplace Act & Rule

(C) Passage towards facilities concerning toilet, washroom and drinking water should be adequately and comfortably illuminated

(D) All of the above

100. As per the Gujarat Occupational Safety, Health & Working Conditions Rules, 2025, which of the following statements is correct?

(A) Application for construction/extension approval of factory plan shall be made in Form 1

(B) Proposed approval shall become null and void if no construction started within 6 months from approval date

(C) Stability certificate of factory issued by Inspector-cum-Facilitator of factories is valid for 5 years

(D) All of the above

101. As per the Gujarat Occupational Safety, Health & Working Conditions Rules, 2025, which among the following statements are true with Notice of Accident?

(i) Fatal accident to be report written within 12 hours.

(ii) Non-fatal accident having 48 hours or more disability within 24 hours after 48 hours of accident.

(iii) Dangerous occurrence written confirmation within 12 hours.

(A) (i) and (iii)

(B) (i) and (ii)

(C) (ii) and (iii)

(D) All of the above

102. What is/are the requirement/s of Safety report as per Manufacture, Storage & Import of Hazardous Chemicals Rules, 1989?

(A) The occupier shall update the safety audit report once a year by conducting a fresh safety audit

(B) The occupier shall forward a copy of the auditor's report along with his comments to the concerned authority within 30 days

(C) Both (A) & (B)

(D) None of the above

103. Which Schedule contains the list of authorities and their duties as per Manufacture, Storage & Import of Hazardous Chemicals Rules, 1989?

(A) Schedule 1

(B) Schedule 3

(C) Schedule 4

(D) Schedule 5

104. What should be checked on the label before using Industrial Safety Net?

(A) Date of manufacturing

(B) The deflection at the centre of the net

(C) Maximum distance below working level

(D) All of the above

105. A length of wire has a resistance of 6 Ohms. The resistance of the wire of the same material three times long and twice the cross-sectional area will be_____.

(A) 36 Ohms

(B) 9 Ohms

(C) 12 Ohms

(D) 1 Ohm

106. When resistance is connected in parallel, the current divides itself in_____.

(A) Direct ratio of resistances

(B) Inverse ratio of resistances

(C) Inverse ratio of potentials

(D) None of the above

107. A fuse wire is made of _____.

(A) Lead-tin alloy

(B) Copper

(C) Tungsten

(D) Nichrome

108. A generator produces 100 kW of power at a potential difference of 10 kV. The power is transmitted through cables of total resistance 5 Ohm. What is the power loss in cables?

(A) 1000 W

(B) 50 W

(C) 250 W

(D) 500 W

109. The dielectric used in high voltage transformer is _____.

(A) Mica

(B) Paraffin

(C) Porcelain

(D) Oiled paper

110. A small metal ball is suspended in a uniform electric field with the help of an insulated thread. If high energy X-ray beam falls on it

(A) the ball will be deflected in the direction of field

(B) the ball will be deflected opposite to the direction of field

(C) the ball will not deflect at all

(D) the ball will fly to infinity

111. The distance between two magnetic poles is doubled and their pole strengths are also doubled. The force between them

(A) increases four times

(B) decreases four times

(C) remains unchanged

(D) None of the above

112. Which of the following statements are correct in terms of relative permeability of material?

(i) When relative permeability of material is slightly less than 1, it is called diamagnetic material.

(ii) When relative permeability of material is much greater than 1, it is called ferromagnetic material.

(iii) When relative permeability of material is slightly more than 1, it is called paramagnetic material.

(iv) When relative permeability of material is much greater than 1, it is called paramagnetic material.

(A) (i), (ii) and (iii)

(B) (ii), (iii) and (iv)

(C) (i), (iii) and (iv)

(D) All of the above

113. A charged particle moves through a magnetic field perpendicular to it. The energy of the particle will _____ while the momentum of the particle will_____.

(A) Be increased, Remain zero

(B) Be decreased, Change

(C) Remain unchanged, Change

(D) Become zero, Zero

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114. At low frequencies, the material used for transformer cores is _____ and at high frequencies, the material used for transformer cores is _____.

(A) Copper, Silicon Iron
(B) Silicon Iron, Ferrite
(C) Soft Iron, Ferrite
(D) Soft Iron, Silicon Iron

115. Which of the following statements are correct for corona effect?

(i) Corona effect causes power loss in the line.

(ii) Corona effect can be reduced by increasing conductor size.

(iii) Corona effect can be reduced by decreasing conductor size.

(iv) Corona effect produces radio frequency waves

(A) (i), (ii) & (iv)
(B) (i), (iii) & (iv)
(C) (i) & (iv)
(D) None of the above

116. In structural design, while assessing the strength of a material, which of the following statements are true?

(i) Strength of a beam is proportional to its width.

(ii) Strength of a beam is inversely proportional to its depth.

(iii) Strength of a beam is inversely proportional to its width.

(iv) Strength of a beam is proportional to the square of its depth.

(A) (i) and (ii)
(B) (i) and (iii)
(C) (i) and (iv)
(D) All of the above

117. Which of the following materials is most elastic?

(A) Steel
(B) Rubber
(C) Plastic
(D) Brass

118. According to I.B.R., which of the following type of joint is preferred for circumferential joint?

(A) Butt joint
(B) Lap joint
(C) Welded joint
(D) None of the above

119. Corrosion resistance of steel is increased by addition of_____.

(A) Sulphur, phosphorous, lead
(B) Vanadium, aluminium
(C) Zinc
(D) Chromium and nickel

120. Which of the following statements are true?

(i) The internal cracks in casting can be easily found out by the ultrasound method of testing.

(ii) The surface and sub-surface cracks in non-magnetic alloy can be easily located and detected by the dye-penetrant test method.

(iii) The internal hot tear defects in castings can be inspected by radiography method.

(iv) The surface and sub-surface cracks in non-magnetic alloy can be easily located and detected by the ultrasound method of testing.

(A) (i), (ii) and (iii)
(B) (i), (iii) and (iv)
(C) (i), (ii) and (iv)
(D) (ii), (iii) and (iv)

121. A solvent room requires 12 air changes/hour. Room volume = 250 m^3.

Required ventilation rate equals_____.

(A) 250 m^3/hr
(B) 1000 m^3/hr
(C) 3000 m^3/hr
(D) 6000 m^3/hr

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122. Which of the following are the methods for planning projects?

(i) Gantt Chart

(ii) CPM (Critical Path Method)

(iii) Parametric Estimating

(iv) PERT (Program Evaluation and Review Technique)

(A) (i), (ii) and (iii)
(B) (i), (iii) and (iv)
(C) (i), (ii) and (iv)
(D) (ii), (iii) and (iv)

123. Inventory control in production, planning and control aims at _____.

(A) Achieving optimization in quality.

(B) Ensuring steady cost against market fluctuations by vendor manage inventory.

(C) Regulate supply and demand.

(D) Acceptable customer service at low capital investment in inventory.

124. Which of the following conditions is not required for employment of physically handicapped person as per the Gujarat Physically Handicapped Persons (Employment in Factories) Act, 1982?

(A) He shall be an adult

(B) His name shall be registered at "Employment Exchange in the State"

(C) A certificate of fitness granted under Section 5 (of the Act) is in the custody of Factory manager

(D) His name is to be entered in a register Form No.II under Rule 3(b) of the Gujarat Physically Handicapped Persons (Employment in Factories) Rules, 1982

125. As per the Chemical Accidents (Emergency Planning Preparedness and Response) Rules, 1996, what is the meaning of off-site emergency plan?

(A) Off-site emergency plan is prepared as per Schedule 12, under Rule 14 of the MSIHC Rule, 1989

(B) Off-site emergency plan is prepared under Rule 13 of the MSIHC Rule, 1989

(C) Off-site emergency plan is prepared under Schedule-11 of the MSIHC Rule, 1989

(D) Off-site emergency plan is prepared under Schedule-8 A of the MSIHC Rule, 1989

126. Which of the following is not consistent with major accidents under the Manufacture, Storage & Import of Hazardous Chemicals Rules, 1989?

(A) Loss of life inside or outside the installation or ten or more injuries inside and/or one or more injuries outside

(B) Explosion of a receiver or, container used for the storage at a pressure greater than atmospheric pressure of any gas or gases including air or any liquid or solid resulting from the compression of gas

(C) Release of toxic chemical or explosion or fire or spillage of hazardous chemicals resulting on site

(D) Off-site emergency or damage to equipment leading to stoppage of process or adverse effects to the environment

127. What is not correct under Rule 10 for safety reports and safety audit reports as per the Manufacture, Storage & Import of Hazardous Chemicals Rules, 1989?

(A) The occupier shall not undertake any industrial activity to which the above rule applies, unless he has prepared a safety report on those industrial activities in Schedule 8 and has sent copy of that report to concerned authority at least 90 days before commencing that activity.

(B) In case of an existing industrial activities, the occupier shall prepare the safety report in Schedule 8 in consultation with the concerned authority and submit the same within one year from the date of commencement of the Manufacture, Storage & Import of Hazardous Chemicals (Amendment) Rules, 1994 to the concerned authority.

(C) After the commencement of the Manufacture, Storage & Import of Hazardous Chemicals (Amendment) Rules, 1994, the occupiers of both the new and existing industrial activities shall carry out an independent safety audit of the respective industrial activities with the help of an expert not associated with such industrial activities.

(D) The occupier shall update a safety audit report once in two years by conducting a fresh safety audit and forward a copy of it with his comments there on within thirty days to the concerned authority.

128. What is the meaning of "*Extremely Flammable Liquids*" as per the Schedule 1, Part I under sub-part (b) flammable chemicals of the Manufacture, Storage & Import of Hazardous Chemicals Rules, 1989?

(A) Chemicals which have flash point lower than or equal to 23°C and initial boiling point less than 35°C

(B) Chemicals which have flash point lower than or equal to 23°C and initial boiling point higher than 35°C

(C) Chemicals which have flash point higher than 23°C but lower than 60°C

(D) Chemicals which have flash point higher than 60°C but lower than 90°C

129. On how much storage of threshold quantity of hydrogen, the provision of onsite emergency plan and safety report is applicable as per Part I, Group 3 – highly reactive substances of Schedule 3 of the Manufacture, Storage & Import of Hazardous Chemicals Rules, 1989?

(A) 5 ton for onsite emergency plan and 50 ton for safety report

(B) 15 ton for onsite emergency plan and 75 ton for safety report

(C) 2 ton for onsite emergency plan and 50 ton for safety report

(D) 10 ton for onsite emergency plan and 25 ton for safety report

130. How much environment protection fund under Section-16 of the Environment (Protection) Act, 1986 shall be allocated to the State Government or Union Territory Administration?

(A) 75% of the penalties to the State Government or Union Territory Administration which has credited to fund

(B) 60% of the penalties to the State Government or Union Territory Administration which has credited to fund

(C) 50% of the penalties to the State Government or Union Territory Administration which has credited to fund

(D) 25% of the penalties to the State Government or Union Territory Administration which has credited to fund

131. What is the limit specified for ambient air quality standards in respect of noise in silent zone in daytime?

(A) 75 dB(A) *Leq*

(B) 65 dB(A) *Leq*

(C) 55 dB(A) *Leq*

(D) 50 dB(A) *Leq*

132. As per Chapter VI-Maternity Benefit under the Code on Social Security, 2020, what is the definition of child?

(A) Child includes stillborn child

(B) Only live born child

(C) Only adopted child

(D) Child includes below the age of 18 years

133. For entitlement to maternity benefit, what is the minimum days a woman must have actually worked in an establishment of the employer from whom she claims maternity benefit in the twelve months immediately preceding the expected date of her delivery as per the Code on Social Security, 2020?

(A) 100 days including the lay-off

(B) 120 days including the lay-off

(C) 80 days including the lay-off

(D) 150 days including the lay-off

134. What is the maximum period entitled to maternity benefit by woman having two or more surviving children under the Code on Social Security, 2020?

(A) 18 weeks of which not more than 6 weeks shall precede the date of her expected delivery

(B) 6 weeks before her expected delivery and 12 weeks after her delivery

(C) 12 weeks after her expected delivery

(D) 12 weeks of which not more than 6 weeks shall precede the date of her expected delivery

135. How much medical bonus and under which condition is every woman entitled to receive from her employer under the Chapter VI of Maternity Benefit of the Code on Social Security, 2020?

(A) Medical bonus of 5000 rupees, if no pre-natal confinement and post-natal care is provided by the employer free of charge

(B) Medical bonus of 10000 rupees, if no pre-natal confinement and post-natal care is provided by the employer free of charge

(C) Medical bonus of 3500 rupees, if no pre-natal confinement and post-natal care is provided by the employer free of charge

(D) Medical bonus of 1000 rupees, if no pre-natal confinement and post-natal care is provided by the employer free of charge

136. When can appeal be filed by any person aggrieved by the order of the inspector-cum-facilitator under Section 72(2), Chapter VI: Maternity Benefit of the Code on Social Security, 2020?

(A) Within 60 days from the date on which such order is communicated to such person

(B) Within 45 days from the date on which such order is communicated to such person

(C) Within 30 days from the date on which such order is communicated to such person

(D) Within 15 days from the date on which such order is communicated to such person

137. Under Chapter VII (Employees' Compensation) of the Code on Social Security, 2020, which of the following statements is NOT correct regarding the meaning of "Serious Bodily Injury" as referred to in Section 73(1)?

(A) Means an injury which involves, or in all probability will involve the permanent loss of the use of, or permanent injury to, any limb

(B) Means the permanent loss of or injury to the sight or hearing

(C) Means the fracture of any limb

(D) Means the enforced absence of the injured person from work for a period of twenty-eight days

138. In case where temporarily disablement whether total or partial results from the injury, how much a half monthly payment is entitled to employee in accordance with the provision of employees' compensation under the Code on Social Security, 2020?

(A) The sum equivalent to 25% of monthly wages of the employee

(B) The sum equivalent to 50% of monthly wages of the employee

(C) The sum equivalent to 30% of monthly wages of the employee

(D) The sum equivalent to 60% of monthly wages of the employee

139. Under Chapter VII (Employee's Compensation) of the Code on Social Security, 2020, an appeal against an order of the Competent Authority relating to the distribution of compensation among the dependents of a deceased employee, or disallowing the claim of a person alleging to be such a dependent shall lie before which court?

(A) Industrial Tribunal

(B) Civil Court

(C) High Court

(D) Sessions Court

140. If any person fails to provide any maternity benefits to which a woman is entitled, under the Code on Social Security, 2020, what is the penalty for that offence?

(A) With imprisonment for a term which may extend to six months with a fine which may extend to one lakh rupees, or with both

(B) With imprisonment for a term which may extend to six months with a fine which may extend to fifty thousand rupees, or with both

(C) With imprisonment for a term which may extend to three years, but which shall not be less than one year and shall be liable to a fine of one lakh rupees

(D) With imprisonment for a term which may extend to three years, but which shall not be less than two months and shall be liable to a fine of fifty thousand rupees

141. By the notification dated 20/05/2026 of Labour, Skill Development and Employment Department, Government of Gujarat, under Sub-section (1) of Section 138 of the Code on Social Security, 2020, who is declared as the Compounding Officer for the offences mentioned in Clause (c) to (p) of the Section 133 of the said code?

(A) Deputy Commissioner of Labour [Except Deputy Commissioner of Labour, Gandhinagar (H.O)] for their respective areas of jurisdiction

(B) Assistant Commissioner of Labour [Except Assistant Commissioner of Labour, Gandhinagar (H.O)] for their respective areas of jurisdiction

(C) Joint Director Industrial Safety & Health for their respective areas of jurisdiction

(D) Both (A) and (B)

142. By the notification dated 20/05/2026 of Labour, Skill Development and Employment Department, Government of Gujarat, under Sub-section (68) of Section 2 of the Code on Social Security, 2020, in its application to the state of Gujarat in relation to the establishment for which it is the appropriate Government, who is appointed as the recovery officer for the purpose of the said code?

(A) Additional Collector or Additional District Magistrate of the district

(B) Deputy Collector or Sub-Divisional Magistrate for their respective jurisdiction

(C) Collector or District Magistrate of the district

(D) All of the above

143. Under Section 87 of the Occupational Safety, Health and Working Conditions Code, 2020, the Directorate General Factory Advice Service and Labour Institutes (DGFASLI) has been renamed as

(A) Directorate General of Industrial Safety and Health

(B) Directorate General of Occupational Safety and Health

(C) Directorate General of Factories and Labour Welfare

(D) Directorate General of Factories Administration

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144. As per the Government of Gujarat Order No. LED/BRC/e-file/11/2025/2193/M3 dated 20 May 2026, which of the following officers has not been designated as a Registering Officer for the registration of factories under Section 3(1) of the Occupational Safety, Health and Working Conditions Code, 2020?

(A) Joint Chief Inspector-cum-Facilitator for the factories (Joint Director, Industrial Safety and Health) for their respective area of regions

(B) Deputy Chief Inspector-cum-Facilitator for the factories (Deputy Director, Industrial Safety and Health) for their respective area of Jurisdiction

(C) Assistant Chief Inspector-cum-Facilitator for the factories (Assistant Director, Industrial Safety and Health) for their respective area of Jurisdiction

(D) Chief Inspector-cum-Facilitator for the factories (Director, Industrial Safety and Health) for whole of the state

145. As per Notification No. GR/2026/51/LED/BRC/e-file/11/2025/2193/M3 dated 20 May 2026 issued by the Labour, Skill Development and Employment Department, Government of Gujarat, who has been appointed as the Compounding Officer under Section 114(1) of the Occupational Safety, Health and Working Conditions Code, 2020, for the whole of the State of Gujarat?

(A) Director, Industrial Safety and Health, Gujarat State

(B) Additional Chief Inspector-cum-Facilitator, Gujarat State

(C) Chief Inspector-cum-Facilitator for the Factories and Building and Other Construction, Gujarat State

(D) Labour Commissioner, Gujarat State

146. As per Notification No. GR/2026/53/LED/BRC/e-file/11/2025/2193/M3 dated 20 May 2026 issued by the Labour, Skill Development and Employment Department, Government of Gujarat under Section 4(1) of the Occupational Safety, Health and Working Conditions Code, 2020, who has been appointed to exercise the functions of the Appellate Officer against the orders made under Section 3 of the said Code in relation to factories in the State of Gujarat?

(A) Secretary, Labour, Skill Development and Employment Department

(B) Additional Chief Secretary, Labour, Skill Development and Employment Department

(C) Joint Chief Secretary, Labour, Skill Development and Employment Department

(D) Chief Inspector-cum-Facilitator for the Factories and Building and Other Construction, Gujarat State

147. As per Notification No. GR/2026/52/LED/BRC/e-file/11/2025/2193/M3 dated 20 May 2026 issued by the Labour, Skill Development and Employment Department, Government of Gujarat, which of the following officers specified in the appended Schedule does not have jurisdiction over the whole of the State of Gujarat under Section 34(6) of the Occupational Safety, Health and Working Conditions Code, 2020 in relation to factories?

(A) Chief Inspector-cum-Facilitator for the Factories & Building and Other Construction

(B) Deputy Chief Inspector-cum-Facilitator (Chemical) for the Factories

(C) Assistant Chief Inspector-cum-Facilitator (Chemical) for the Factories

(D) Law Officer Class-I

148. As per Section 2(I) of the Occupational Safety, Health and Working Conditions Code, 2020, which of the following factors shall be considered while recognizing a competent person by the Chief Inspector-cum-Facilitator for carrying out tests, examinations and inspections required to be done in a factory under the said Code?

(A) In case of extra ordinary experienced person, relaxed qualification and relaxed facilities available at his disposal

(B) The prescribed qualifications, experience and facilities available at the disposal of such person

(C) The prescribed qualifications and experience of the persons employed in such institution and the facilities available therein

(D) Both (B) and (C)

149. What is the meaning of Factory as per Section 2(w) of the Occupational Safety, Health and Working Conditions Code, 2020?

(A) Means any premises including precincts thereof where twenty or more workers are working on any day of the preceding twelve months and any part of which manufacturing process is being carried on with the aid of power, or is ordinary so carried on

(B) Means any premises including precincts thereof where forty or more workers are working on any day of the preceding twelve months and any part of which manufacturing process is being carried on with the aid of power, or is ordinary so carried on

(C) Means any premises including precincts thereof where ten or more workers are working on any day of the preceding twelve months and any part of which manufacturing process is being carried on with the aid of power, or is ordinary so carried on or means any premises including precincts thereof where twenty or more workers are working on any day of the preceding twelve months and any part of which manufacturing process is being carried on without the aid of power, or is ordinary so carried on

(D) Both (A) and (B)

150. Under Section 2(za) of the Occupational Safety, Health and Working Conditions Code, 2020, a process or activity shall be regarded as a "Hazardous Process" if, unless special care is taken, it is likely to

(A) Cause damage only to machinery and equipment used in the establishment

(B) Cause material impairment to the health of persons engaged in or connected with the process or result in pollution of the general environment

(C) Increase the cost of production or reduce the efficiency of the industry

(D) Affect only the quality of the finished products or byproducts

151. How is the Chief Inspector-cum-Facilitator appointed as per the Occupational Safety, Health and Working Conditions Code, 2020?

(A) As per the provisions of sub-section (1) of the Section 34, the appropriate Government may, by notification, appoint any person possessing the prescribed qualifications and experiences appoint the Chief Inspector-cum-Facilitator

(B) As per the provisions of sub-section (5) of the Section 34, the appropriate Government may, by notification, appoint any person possessing the prescribed qualifications and experiences appoint the Chief Inspector-cum-facilitator

(C) As per the provisions of sub-section (6) of the Section 34, the appropriate Government may, by notification, appoint any person possessing the prescribed qualifications and experiences appoint the Chief Inspector-cum-facilitator

(D) As per the provisions of sub-section (7) of the Section 34, the appropriate Government may, by notification, appoint any person possessing the prescribed qualifications and experiences appoint the Chief Inspector-cum-facilitator

152. Which of the following process is not the manufacturing process as per Section 2(zi) of the Occupational Safety, Health and Working Conditions Code, 2020?

(A) Pumping oil, water, sewage or any other substance

(B) Generating, transforming or transmitting power

(C) Preserving or storing any article in cold storage

(D) Such other processes as the State Government may notify

153. Who shall not be the "Occupier" of the factory as per Section 2(zs) of the Occupational Safety, Health and Working Conditions Code, 2020?

(A) The person who has ultimate control over the affairs of the factory

(B) In case of firm or other association of individuals, any one of the individual partners or members thereof

(C) In case of company, any one of the independent directors within the meaning of sub-section (6) of Section 149 of the Companies Act, 2013

(D) In case of factory owned and controlled by the Central Government or any State Government or any local authority, the person or persons appointed to manage affairs of the factory by the Central Government, State Government or the local authority or such other authority as may be prescribed by the Central Government

154. As per the Section 2(zzj) of the Occupational Safety, Health and Working Conditions Code, 2020, which of the following is not covered under the definition of "Wages"?

(A) Basic pay
(B) Dearness allowance
(C) Retaining allowance
(D) Any overtime allowance

155. Without prejudice to the generality of the provisions of Section 6(1), which of the following is not the duty of the employer in case of factories as per the Occupational Safety, Health and Working Conditions Code, 2020?

(A) Ensure so far as is reasonably practicable, that the article is so designed and constructed in the factory as to be safe and without risk to the health of the workers when properly used
(B) The provision and maintenance of plant and systems of work in the workplace that are safe and without risk to health
(C) The arrangements in the workplace for ensuring safety and absence of risk to health in connection with the use, handling, storage and transport of articles and substances
(D) The provision of such information, instruction, training and supervision as are necessary to ensure the health and safety of all employees at work

156. Any qualified medical practitioner attends any person, who is or has been employed in an establishment and who is, or is believed by the qualified medical practitioner to be suffering from any disease specified in the Third Schedule of the Occupational Safety, Health and Working Conditions Code, 2020, is not reporting in writing to the Office of the Chief Inspector-cum-Facilitator, what shall be the punishment under the said Code?

(A) Up to Rs. 1000/-
(B) Up to Rs. 10000/-
(C) Up to Rs. 50000/-
(D) Up to Rs. 100000/-

157. In which Section of the Occupational Safety, Health and Working Conditions Code, 2020, the provisions of the duties of the employee are given?

(A) Section 13
(B) Section 9
(C) Section 14
(D) Section 15

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158. Under the Occupational Safety, Health and Working Conditions Code, 2020, how many persons connected with the field of occupational safety and health or representatives from reputed research institutions or similar disciplines may be appointed by the Central Government to the National Occupational Safety and Health Advisory Board and for what tenure?

(A) Not exceeding three persons, for a period of three years

(B) Not exceeding five persons, for a period of three years

(C) Not exceeding seven persons, for a period of five years

(D) Not exceeding five persons, for a period of five years

159. Who shall declare by notification, standards on Occupational Safety & Health for work place relating to factory under Section 18 of the Occupational Safety, Health and Working Conditions Code, 2020?

(A) Director General of Occupational Safety and Health (DGOSH)

(B) State Government

(C) Central Government

(D) Ministry of Labour and Employment

160. Under which Section of the Occupational Safety, Health and Working Conditions Code, 2020, the provisions of Safety Committee and Safety Officers is made?

(A) Section 41-B

(B) Section 41-E

(C) Section 41-G

(D) Section 22

161. Which of the power is not conferred to Central Government to prescribe any of the following matters in establishments regarding responsibility of employer for maintaining health, safety and working condition under Section 23(2) of the Occupational Safety, Health and Working Conditions Code, 2020?

(A) Cleanliness and hygiene

(B) Environment free from dust, noxious gas, fumes and other impurities

(C) Potable drinking water

(D) Arrangement of canteen, cloak room and adequate first aid boxes

162. Where is the facility of canteen in an establishment for employees applicable under Section 24 of the Occupational Safety, Health and Working Conditions Code, 2020?

(A) Where fifty or more workers including contract labourers are ordinarily employed

(B) Where hundred or more workers including contract labourers are ordinarily employed

(C) Where more than two hundred and fifty workers including contract labourers are ordinarily employed

(D) Where more than hundred workers excluding contract labourers are ordinarily employed

163. Where is the facility of Ambulance Room applicable as per the provisions of Section 24(2)(i) of the Occupational Safety, Health and Working Conditions Code, 2020?

(A) Where more than 500 workers are ordinarily employed

(B) Where more than 500 workers are employed in any day of the preceding twelve months

(C) Where more than 250 workers are ordinarily employed

(D) Where more than 100 workers are employed in any day of the preceding twelve months

164. Where adequate, suitable and separate shelters or rest rooms for male, female and transgender workers and lunchroom shall be required as per the Section 24(2)(iii) of the Occupational Safety, Health and Working Conditions Code, 2020?

(A) Where 150 or more workers are employed in any day of the preceding twelve months

(B) Where 100 or more workers are employed in any day of the preceding twelve months

(C) Where 50 or more workers are employed in any day of the preceding twelve months

(D) Where more than 50 workers are ordinarily employed

165. In which factories is appointment of Welfare Officer applicable as per Section 24(2)(iv) of the Occupational Safety, Health and Working Conditions Code, 2020?

(A) Factories employing 500 or more workers

(B) Factories employing more than 500 workers

(C) Factories employing more than 250 workers

(D) Factories ordinarily employing 250 or more workers

166. As per Section 32 of the Occupational Safety, Health and Working Conditions Code, 2020, in case of a worker who is superannuated or dies while in service during a calendar year, when shall such worker or his/her heir or nominee be entitled to receive wages in lieu of the leave due to the worker immediately before such superannuation or death?

(A) Before the expiry of second working day from the date of such superannuation or death

(B) Before the expiry of three months from the date of such superannuation or death

(C) Before the expiry of one month from the date of such superannuation or death

(D) Before the expiry of two months from the date of such superannuation or death

167. Which type of maintenance of registers, records and returns are not required as per Section 33 of the Occupational Safety, Health and Working Conditions Code, 2020?

(A) Leave, wages, overtime work, attendance and dangerous occurrences

(B) Employment of adolescence

(C) Stability Certificate

(D) Wages paid and receipts there for

168. As per Section 35 of the Occupational Safety, Health and Working Conditions Code, 2020, which of the following statements regarding the powers of an Inspector-cum-Facilitator are correct?

(i) The Inspector-cum-Facilitator may enter with such assistants of persons which are in the service of Government or any local or other public authority, or with an expert as he thinks fit, any place which is used, or which he has reason to believe is used as a workplace.

(ii) The Inspector-cum-Facilitator may require the production of any register or any other document relating to the workplace or work activity.

(iii) The Inspector-cum-Facilitator may seize records only after obtaining prior approval from the Chief Inspector-cum-Facilitator.

(iv) The Inspector-cum-Facilitator may take measurements, photographs and videography and make such recordings as he considers necessary for the purpose of any examination or inquiry.

(A) (i), (ii) and (iv) only

(B) (i) and (iii) only

(C) (ii) and (iii) only

(D) All of the above

169. Which of the following provisions is not matching with the provisions of Section 37 regarding Third Party Audit and Certification under the Occupational Safety, Health and Working Conditions Code, 2020?

(A) Appropriate Government may, by notification, formulate a scheme to empanel experts possessing such qualifications and experience as may be prescribed

(B) Experts empanelled shall assign Third Party Audit and certification in a randomised manner by the appropriate Government through a web-based scheme

(C) Experts empanelled shall carry out the audit and certification in the manner and for the purpose specified in the scheme

(D) Experts empanelled shall perform such duties as may be specified in such scheme and submit his report to the concerned Inspector-cum-Facilitator only

170. Under Section 38 of the Occupational Safety, Health and Working Conditions Code, 2020, what special power is conferred upon an Inspector-cum-Facilitator where conditions in a factory pose a serious hazard or imminent danger to workers or the general public?

(A) The Inspector-cum-Facilitator may immediately close the factory permanently without issuing any order

(B) The Inspector-cum-Facilitator may, by a written order, prohibit the occupier from employing any person in the factory or any part thereof, except the minimum number of persons necessary to attend to essential tasks, until the hazard or danger is removed

(C) The Inspector-cum-Facilitator may impose a monetary penalty on the occupier and allow normal operations to continue

(D) The Inspector-cum-Facilitator may transfer the management of the factory to the State Government until the danger is removed

171. Under Section 38(1)(A)(c) of the Occupational Safety, Health and Working Conditions Code, 2020, any person aggrieved by an order of the Inspector-cum-Facilitator under clause (a) or by an order of the Chief Inspector-cum-Facilitator under clause (b) may prefer an appeal to which authority?

(A) High Court

(B) Industrial Tribunal

(C) State Government

(D) District Court

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172. Under Section 39 of the Occupational Safety, Health and Working Conditions Code, 2020, confidential information relating to any factory, including copies of or extracts from registers, records, manufacturing processes or commercial business information acquired by the Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator during the course of inspection may not be disclosed to which of the following?

(A) Any court

(B) Any committee or board constituted under this code

(C) Any trade union representative of the factory

(D) A commissioner for employee's compensation

173. Under Section 39 of the Occupational Safety, Health and Working Conditions Code, 2020, which of the following statements regarding complaints made to the Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator is correct?

(A) The source of a complaint may be disclosed to the employer under the provisions of the Right to Information Act, 2005

(B) The Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator may disclose the identity of the complainant only with the prior approval of the State Government

(C) The Chief Inspector-cum-Facilitator or Inspector-cum-Facilitator shall neither disclose the source of the complaint without the consent of the complainant nor reveal to the employer that an inspection is being carried out pursuant to such complaint

(D) The identity of the complainant shall be disclosed to the employer immediately after completion of the inspection

174. Under Section 42(1) of the Occupational Safety, Health and Working Conditions Code, 2020, in respect of factories carrying on hazardous processes, who may appoint qualified medical practitioners as medical officers for the purposes of the Code?

(A) The occupier of the factory

(B) The appropriate Government

(C) The Chief Inspector-cum-Facilitator

(D) The National Occupational Safety and Health Advisory Board

175. Which of the following is not the duty of the Medical Officer appointed by appropriate Government under Section 42(2) of the Occupational Safety, Health and Working Conditions Code, 2020?

(A) Examination and certification of worker in a factory engaged in dangerous occupations or processes as may be prescribed

(B) Exercise of such medical supervision for any factory as may be prescribed by the appropriate Government where cases of illness have occurred which it is reasonable to believe are due to the nature of any process

(C) The examination and certification of adolescents for the purpose of ascertained this fitness for employment in factory as may be prescribed by the appropriate Government in any work which is likely to cause injury to their health

(D) The examination and certification of young persons under this code

176. Under the special provisions relating to employment of women, which of the following is not correct as per Section 43 of the Occupational Safety, Health and Working Conditions Code, 2020?

(A) Women shall be entitled to be employed in all establishments for all types of work under the Code

(B) Women may be employed before 6 a.m. and beyond 7 p.m. with their consent and subject to such conditions relating to safety, holidays and working hours as may be prescribed by the appropriate Government

(C) Employer shall employ women in any establishment for any type of work, including hazardous processes

(D) Any other conditions to be observed by the employer as may be prescribed by the appropriate Government

177. If a State Government or a Chief Inspector-cum-Facilitator refuses to grant permission to site, construction or extension of a factory and licensing of a factory, within which period the applicant may appeal for such refusal under the Occupational Safety, Health and Working Conditions Code, 2020?

(A) Within six months of such refusal

(B) Within ninety days of such refusal

(C) Within sixty days of such refusal

(D) Within thirty days of such refusal

178. Which of the following is NOT a provision that may be prescribed by the appropriate Government in respect of dangerous operations under Section 82 of the Occupational Safety, Health and Working Conditions Code, 2020?

(A) Specifying a manufacturing process or operation and declaring it to be dangerous

(B) Prohibiting or restricting the employment of pregnant women in such manufacturing process or operation

(C) Providing for periodical medical examination of workers at the cost of the occupier to ascertain their fitness for such employment

(D) Prescribing the maximum number of hours for which a worker may be employed in such dangerous operations

179. Which is not the specific responsibility of the occupier in relation to hazardous process, under the provisions of the Occupational Safety, Health and Working Conditions Code, 2020?

(A) Appointment of competent supervisors to supervise in handling of hazardous substances

(B) Medical examination of every worker before worker is assigned to a job involving the handling of a hazardous substance

(C) Medical examination while continuing in such job and after worker has seized to work in such job at the interval not exceeding twelve months

(D) Annually medical examination for free of cost i.e. within 120 days from the commencement of calendar year of every worker/employee, who has completed 45 years of age by qualified medical officer

180. Under which Section of the Occupational Safety, Health and Working Conditions Code, 2020, are the provisions relating to compulsory disclosure of information by the occupier in respect of hazardous processes in a factory provided?

(A) Section 41-B

(B) Section 84

(C) Section 85

(D) Section 86

181. Under which Section of the Occupational Safety, Health and Working Conditions Code, 2020, may the State Government prescribe the permissible limits of exposure of chemical and toxic substances in any manufacturing process carried on in a factory?

(A) Section 86
(B) Section 87
(C) Section 88
(D) Section 89

182. What is the penalty in first offence for non-maintenance of registers, records and non-filing of return, etc, under the Occupational Safety, Health and Working Conditions Code, 2020?

(A) Penalty which shall not be less than 50,000/-, but which may extend up to two lakh rupees
(B) Penalty which shall not be less than 1,00,000/-, but which may extend up to two lakh rupees
(C) Penalty which shall not be less than 50,000/-, but which may extend up to one lakh rupees
(D) Penalty which shall not be less than 75,000/-, but which may extend up to two lakh rupees

183. If any person fails to comply with or contravenes any duties under this Code or regulations, rules, bye-laws or orders made there under and such non-compliance or contravention has resulted in an accident or dangerous occurrences causing death, what is the punishment under Section 103 of the Occupational Safety, Health and Working Conditions Code, 2020?

(A) Punishment with imprisonment for a term which may extend to two years or with a fine which shall not be less than five lakh rupees or with both
(B) Punishment with imprisonment for a term which may extend to one year or with a fine which shall not be less than four lakh rupees or with both
(C) Punishment with imprisonment for a term which may extend to one year or with a fine which shall not be less than two lakh rupees but not exceeding four lakh rupees or with both
(D) Punishment with imprisonment for a term which may extend to two years or with a fine which shall not be less than five lakh rupees but not exceeding ten lakh rupees or with both

184. Under the provision to Section 103 of the Occupational Safety, Health and Working Conditions Code, 2020, while imposing a fine, the Court may direct that not less than what percentage of the fine shall be given as compensation to the victim or, in case of death, to the legal heirs of the victim?

(A) 25% (B) 33%

(C) 50% (D) 75%

185. What punishment is prescribed under Section 104 of the Occupational Safety, Health and Working Conditions Code, 2020 for continuing to work in contravention of a general or special order issued under Section 38?

(A) Imprisonment for a term which may extend to one year and fine which may extend up to two lakh rupees

(B) Imprisonment for a term which may extend to two years and shall also be liable to fine which may extend up to five lakh rupees

(C) Imprisonment for a term which may extend to three years or fine which may extend up to ten lakh rupees or both

(D) Penalty extends up to five lakh rupees

186. How many industries involving hazardous processes are listed in the First Schedule under Section 2(za) of the Occupational Safety, Health and Working Conditions Code, 2020?

(A) 29 (B) 30

(C) 40 (D) 50

187. What is the meaning of "Flash Point" as per Rule 2(1)(27) of the Gujarat Occupational Safety, Health & Working Conditions Rules-2025?

(A) Means the minimum liquid temperature at which a spark or flame causes an instantaneous flash in the vapour space above the liquid

(B) Means lowest temperature at which flammable liquid gives off sufficient vapors for sustained burning when ignited by a pilot flame

(C) Means lowest temperature at which spontaneous combustion of the product begins in the absence of any flame or spark

(D) Means the temperature at which the vaporization of a liquid starts

188. As per the Gujarat Occupational Safety, Health & Working Conditions Rules 2025, which form shall be submitted electronically to report a dangerous occurrence that has not resulted in any bodily injury to any person?

(A) Form No. 5
(B) Form No. 6
(C) Form No. 6A
(D) Form No. 8

189. Under Rule 15 of the Gujarat Occupational Safety, Health and Working Conditions Rules, 2025, which of the following statements regarding the State Occupational Safety and Health Advisory Board is NOT correct?

(A) The tenure of the nominated members referred to in Clauses (viii), (ix), (x) and (xiii) of sub-rule (1) is three years

(B) A non-official member who fails to attend three consecutive meetings without obtaining leave sanctioned by the Chairperson shall cease to be a member, unless the State Government directs otherwise for sufficient cause

(C) In the event of equality of votes on any matter before the Board, the Member Secretary shall exercise the casting vote

(D) Ordinarily, the Board shall meet once in every six months and a special meeting shall be called within 15 days of receipt of a written requisition from not less than one-third of its members

190. Under Rule 47 of the Occupational Safety, Health and Working Conditions (Central) Rules, 2026, what latrine and urinal accommodation is prescribed for female employees?

(A) At least one separate latrine shall be provided for every 15 female employees employed at the same time and no separate urinal accommodation is prescribed for female employees

(B) At least one separate latrine shall be provided for every 25 female employees employed at the same time

(C) At least one separate latrine shall be provided for every 25 female employees employed at the same time and one urinal shall be provided for every 50 female employees employed at the same time

(D) At least one separate latrine-cum-urinal shall be provided for every 50 female employees employed at the same time

191. Under Rule 54 of the Occupational Safety, Health and Working Conditions (Central) Rules, 2026, what minimum percentage of workers in every establishment is required to be trained in first-aid procedures?

(A) 10% of the workers
(B) 25% of the workers
(C) 33% of the workers
(D) 50% of the workers

192. Under Rule 53 of the Occupational Safety, Health and Working Conditions (Central) Rules, 2026, which of the following statements is true in terms of provision of canteen?

(A) Food, drink and other items to be sold on a no profit no loss basis
(B) Canteen Managing Committee is constituted to carry out the functions like arrangement of menu, timing of meal
(C) The Canteen Managing Committee shall consist of an equal number of representatives of workers and employees
(D) Canteen managed by a co-operative society registered under the Multi-State Co-operative Societies Act, 2002 shall appoint Canteen Managing Committee.

193. Under the criterion adopted in the Factories Act, 1948, what percentage of particles having an aerodynamic diameter of 5.0 μm should pass the size selector?

(A) 90%
(B) 75%
(C) 50%
(D) 25%

194. Which of the following devices is specifically used with dust sampling instruments to eliminate the non-respirable fraction and obtain the desired respirable fraction?

(A) Electrostatic precipitator and scrubber
(B) Horizontal elutriator and cyclone elutriator
(C) Impinger and thermal precipitator
(D) Filtration unit and photometer

195. Which of the following lung volumes cannot be measured directly with a spirometer?

(A) Tidal Volume (TV)

(B) Inspiratory Reserve Volume (IRV)

(C) Expiratory Reserve Volume (ERV)

(D) Residual Volume (RV)

196. Occupational Noise-Induced Hearing Loss (NIHL) is best described as

(A) A temporary sensorineural hearing loss that develops gradually after prolonged exposure to high levels of noise.

(B) A cumulative, permanent sensorineural hearing loss that develops gradually after prolonged exposure to high levels of noise

(C) A conductive hearing loss that develops gradually after prolonged exposure to high frequency of noise

(D) A hearing loss caused only by exposure to industrial machine noise.

197. Which of the following statements are true for occupational health-related toxicological effect?

(i) Massive pulmonary oedema with delayed onset after inhalation is toxic effect of phosgene on the human body.

(ii) Haematotoxicity leading to aplastic anaemia and Acute Myeloid Leukaemia (AML) is significant chronic occupational health effect of prolonged benzene exposure

(iii) Massive pulmonary oedema with delayed onset after inhalation is significant chronic occupational health effect of prolonged benzene exposure

(iv) Haematotoxicity leading to aplastic anaemia and Acute Myeloid Leukaemia (AML) is toxic effect of phosgene on the human body.

(A) (i) and (ii)

(B) (ii) and (iii)

(C) (i), (ii) and (iii)

(D) (ii), (iii) and (iv)

[Contd.

198. Which UN Class includes organic peroxides?

(A) Class 4.2 **(B) Class 5.2**

(C) Class 6.1 **(D) Class 8**

199. A chemical container bears the following information: UN 1090, Class 3 label, Packing Group II. Which statement is most appropriate?

(A) The chemical is highly toxic but non-flammable

(B) The chemical is a flammable liquid presenting medium danger

(C) The chemical is an oxidizer with medium danger

(D) Packing Group II indicates environmental hazard

200. Which of the following statements is correct for labelling of hazardous chemical?

(A) NFPA is intended mainly for emergency responders, whereas GHS is for hazard communication during handling

(B) GHS is intended mainly for emergency responders, whereas NFPA is for hazard communication during handling

(C) GHS contains all the required information of MSDS

(D) NFPA and GHS both serve identical purpose
