

दि. 12/12/2015

CODE : ZO6

प्रश्नपुस्तिका क्रमांक  
BOOKLET NO.

201061

वेळ : 1 ( एक ) तास

प्रश्नपुस्तिका  
चाळणी परीक्षा

एकूण प्रश्न : 100

एकूण गुण : 200

### सूचना

- (1) सदर प्रश्नपुस्तिकेत 100 अनिवार्य प्रश्न आहेत. उमेदवारांनी प्रश्नांची उत्तरे लिहिण्यास सुरुवात करण्यापूर्वी या प्रश्नपुस्तिकेत सर्व प्रश्न आहेत किंवा नाहीत याची खात्री करून घ्यावी. असा तसेच अन्य काही दोष आढळल्यास ही प्रश्नपुस्तिका समवेक्षकांकडून लगेच बदलून घ्यावी.
- (2) आपला परीक्षा-क्रमांक ह्या चौकोनांत न विसरता बॉलपेनने लिहावा.
- (3) वर छापलेला प्रश्नपुस्तिका क्रमांक तुमच्या उत्तरपत्रिकेवर विशिष्ट जागी उत्तरपत्रिकेवरील सूचनेप्रमाणे न विसरता नमूद करावा.
- (4) या प्रश्नपुस्तिकेतील प्रत्येक प्रश्नाला 4 पर्यायी उत्तरे सुचविली असून त्यांना 1, 2, 3 आणि 4 असे क्रमांक दिलेले आहेत. त्या चार उत्तरांपैकी सर्वात योग्य उत्तराचा क्रमांक उत्तरपत्रिकेवरील सूचनेप्रमाणे तुमच्या उत्तरपत्रिकेवर नमूद करावा. अशा प्रकारे उत्तरपत्रिकेवर उत्तरक्रमांक नमूद करताना तो संबंधित प्रश्नक्रमांकासमोर छायांकित करून दर्शविला जाईल याची काळजी घ्यावी. ह्याकरिता फक्त काळ्या शाईचे बॉलपेन वापरावे, पेन्सिल वा शाईचे पेन वापरू नये.
- (5) सर्व प्रश्नांना समान गुण आहेत. यास्तव सर्व प्रश्नांची उत्तरे द्यावीत. घाईमुळे चुका होणार नाहीत याची दक्षता घेऊनच शक्य तितक्या वेगाने प्रश्न सोडवावेत. क्रमाने प्रश्न सोडविणे श्रेयस्कर आहे पण एखादा प्रश्न कठीण वाटल्यास त्यावर वेळ न घालविता पुढील प्रश्नाकडे वळावे. अशा प्रकारे शेवटच्या प्रश्नापर्यंत पोहोचल्यानंतर वेळ शिल्लक राहिल्यास कठीण म्हणून वगळलेल्या प्रश्नांकडे परतणे सोईस्कर ठरेल.
- (6) उत्तरपत्रिकेत एकदा नमूद केलेले उत्तर खोडता येणार नाही. नमूद केलेले उत्तर खोडून नव्याने उत्तर दिल्यास ते तपासले जाणार नाही.
- (7) प्रस्तुत परीक्षेच्या उत्तरपत्रिकांचे मूल्यांकन करताना उमेदवाराच्या उत्तरपत्रिकेतील योग्य उत्तरांनाच गुण दिले जातील. तसेच "उमेदवाराने वस्तुनिष्ठ बहुपर्यायी स्वरूपाच्या प्रश्नांची दिलेल्या चार उत्तरांपैकी सर्वात योग्य उत्तरेच उत्तरपत्रिकेत नमूद करावीत. अन्यथा त्यांच्या उत्तरपत्रिकेत सोडविलेल्या प्रत्येक चार चुकीच्या उत्तरांसाठी एका प्रश्नाचे गुण वजा करण्यात येतील".

### ताकीद

ह्या प्रश्नपत्रिकेसाठी आयोगाने विहित केलेली वेळ संपेपर्यंत ही प्रश्नपुस्तिका आयोगाची मालमत्ता असून ती परीक्षाकक्षात उमेदवाराला परीक्षेसाठी वापरण्यास देण्यात येत आहे. ही वेळ संपेपर्यंत सदर प्रश्नपुस्तिकेची प्रत/प्रती, किंवा सदर प्रश्नपुस्तिकेतील काही आशय कोणत्याही स्वरूपात प्रत्यक्ष वा अप्रत्यक्षपणे कोणत्याही व्यक्तीस पुरविणे, तसेच प्रसिद्ध करणे हा गुन्हा असून अशी कृती करणाऱ्या व्यक्तीवर शासनाने जारी केलेल्या "परीक्षांमध्ये होणाऱ्या गैरप्रकारांना प्रतिबंध करण्याबाबतचा अधिनियम-82" यातील तरतुदीनुसार तसेच प्रचलित कायद्याच्या तरतुदीनुसार कारवाई करण्यात येईल व दोषी व्यक्ती कमाल एक वर्षाच्या कारावासाच्या आणि/किंवा रुपये एक हजार रकमेच्या दंडाच्या शिक्षेस पात्र होईल.

तसेच ह्या प्रश्नपत्रिकेसाठी विहित केलेली वेळ संपण्याआधी ही प्रश्नपुस्तिका अनधिकृतपणे बाळगणे हा सुद्धा गुन्हा असून तसे करणारी व्यक्ती आयोगाच्या कर्मचारीवृंदापैकी, तसेच परीक्षेच्या पर्यवेक्षकीयवृंदापैकी असली तरीही अशा व्यक्तीविरुद्ध उक्त अधिनियमानुसार कारवाई करण्यात येईल व दोषी व्यक्ती शिक्षेस पात्र होईल.

पुढील सूचना प्रश्नपुस्तिकेच्या अंतिम पृष्ठावर पहा

पर्यवेक्षकांच्या सूचनेविना हे सील उघडू नये

कच्च्या कामासाठी जागा /SPACE FOR ROUGH WORK

1. How is morphine metabolized in liver ?  
(1) Conjugation with glucuronic acid      (2) Conjugation with sulfuric acid  
(3) Conjugation with acetic acid      (4) Glycosylation

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2. Which of the following NSAID has got plasma half life more than 50 hours ?  
(1) Diclofenac      (2) Naproxen      (3) Tolmetin      (4) Piroxicam

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3. Which of the following chemotherapeutics is **not** an inhibitor of folate synthesis ?  
(1) Mafenide      (2) Sulfadiazine      (3) Sulfisoxazole      (4) Norfloxacin

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4. In case of Rh system related to blood groups, which is the most immunologically active antigen ?  
(1) C antigen      (2) E antigen      (3) D antigen      (4) d antigen

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5. Which one of the following drugs does **not** accelerate degradation of oral contraceptives ?  
(1) Rifampin      (2) Phenytoin      (3) Barbiturate      (4) Isoniazid

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6. The life span of erythrocytes in the circulation is of about :  
(1) 7 days      (2) 210 days      (3) 12 days      (4) 120 days

---

7. Which one of the following is a short - acting hypnotic ?  
(1) Diazepam      (2) Phenobarbital      (3) Triazolam      (4) Flurazepam

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8. Which of the following Para-aminophenol derivative may cause neutropenia, thrombocytopenia, nephropathy and skin reactions ?  
(1) Aspirin      (2) Paracetamol      (3) Phenylbutazone      (4) Indomethacin

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कच्चा कामासाठी जागा /SPACE FOR ROUGH WORK

9. In which form is a licence for the operation of blood bank or for processing whole Human Blood for Components and manufacture of blood products issued ?

- (1) Form No. 28-C (2) Form No. 25-B (3) Form No. 25-C (4) Form No. 25-D
- 

10. Type I hypersensitivity reaction is mediated by :

- (1) IgG, IgM antibodies (2) T Cell  
(3) IgG or IgM antibodies (4) None of the above
- 

11. The oral anticoagulants reduce the synthesis of the following class of factors :

- (1) (I), (III), (IV), (XII) (2) (I), (V), (XI), (XII)  
(3) (II), (VII), (IX), (X) (4) (I), (V), (XII), (XIII)
- 

12. Which of the following local anaesthetics has a short duration of action ?

- (1) Tetracaine (2) Bupivacaine (3) Procaine (4) Ropivacaine
- 

13. What is the incubation period of Hepatitis B virus ?

- (1) 7 to 40 days (2) 45 to 180 days  
(3) 10 to 30 days (4) 200 to 300 days
- 

14. What is the half-life in hours of fluconazole ?

- (1) 6 (2) 10 (3) 30 (4) 60
- 

15. Which of the following drugs is **not** a uterine relaxant ?

- (1) Ergotamine (2) Nifedipine (3) Aspirin (4) Salbutamol
- 

16. An acute development of tolerance to the rapid and repeated administration of drug is known as :

- (1) Idiosyncrasy (2) Tachyphylaxis  
(3) Potentiasm (4) Cumulation
- 

कच्चा कामासाठी जागा /SPACE FOR ROUGH WORK

17. Which one of the following is **not** an adverse effect of opioid analgesics ?

- |                         |                       |
|-------------------------|-----------------------|
| (1) Nausea and vomiting | (2) Urinary retention |
| (3) Urticaria           | (4) Diarrhoea         |
- 

18. Match the following :

- |                            |                              |
|----------------------------|------------------------------|
| (a) Human papillomavirus   | (i) Urethritis, epididymitis |
| (b) Ureaplasma urealyticum | (ii) Urethritis              |
| (c) Neisseria gonorrhoeae  | (iii) Prostatitis            |
| (d) Chlamydia trachomatis  | (iv) Cancer of penis         |

**Answer Options :**

- |     | (a)   | (b)   | (c)   | (d)   |
|-----|-------|-------|-------|-------|
| (1) | (iv)  | (ii)  | (iii) | (i)   |
| (2) | (i)   | (iii) | (iv)  | (ii)  |
| (3) | (ii)  | (iv)  | (i)   | (iii) |
| (4) | (iii) | (i)   | (ii)  | (iv)  |
- 

19. Which of the following drugs is **not** diuretic ?

- |                |                         |
|----------------|-------------------------|
| (1) Furosemide | (2) Spironolactone      |
| (3) Nifedipine | (4) Hydrochlorothiazide |
- 

20. Which of the following statements is **correct** ?

- (1) Blood group A individuals can make anti-A antibodies.
  - (2) Blood group A individuals can make anti-B antibodies.
  - (3) Blood group AB individuals make both anti-A antibodies and anti-B antibodies
  - (4) Blood group 'O' individuals cannot make anti-A antibodies and anti-B antibodies
- 

21. Which of the following is the **correct** combination of binding during initial step in infection of HIV ?

- |                    |                   |
|--------------------|-------------------|
| (1) gp 240 - CD 12 | (2) gp 220 - CD 8 |
| (3) gp 160 - CD 8  | (4) gp 120 - CD 4 |
- 

कच्चा कामासाठी जागा /SPACE FOR ROUGH WORK

22. Which of the following drugs is used in Hypothyroid state ?

- |                      |                 |
|----------------------|-----------------|
| (1) Propylthiouracil | (2) Methimazole |
| (3) Levothyroxine    | (4) Carbimazole |
- 

23. Match the following :

- |              |                      |
|--------------|----------------------|
| (a) Type I   | (i) Delayed          |
| (b) Type II  | (ii) Cytotoxic       |
| (c) Type III | (iii) Immune complex |
| (d) Type IV  | (iv) Anaphylatic     |

**Answer Options :**

- |     | (a)   | (b)   | (c)   | (d)   |
|-----|-------|-------|-------|-------|
| (1) | (iv)  | (ii)  | (iii) | (i)   |
| (2) | (ii)  | (iii) | (i)   | (iv)  |
| (3) | (i)   | (iv)  | (ii)  | (iii) |
| (4) | (iii) | (i)   | (iv)  | (ii)  |
- 

24. What happens when a person with type B positive blood receives a transfusion of type AB positive blood ?

- (1) The recipient's antibodies will react with the donor's red blood cells.
  - (2) The donor's antigens will destroy the recipient's antibodies.
  - (3) The donor's antibodies will react with and destroy all of the recipient's red blood cells.
  - (4) The recipient's blood type will change from Rh<sup>+</sup> to Rh<sup>-</sup>.
- 

25. Which one of the following is a benzodiazepine antagonist ?

- |                |                   |                |               |
|----------------|-------------------|----------------|---------------|
| (1) Flurazepam | (2) Phenobarbital | (3) Flumazenil | (4) Buspirone |
|----------------|-------------------|----------------|---------------|
- 

26. The calcium disodium edetate is used primarily to treat one of the following heavy metal poisoning.

- |          |             |            |              |
|----------|-------------|------------|--------------|
| (1) Lead | (2) Mercury | (3) Copper | (4) Antimony |
|----------|-------------|------------|--------------|
- 

कच्चा कामासाठी जागा /SPACE FOR ROUGH WORK

27. The drug paracetamol possesses the following set of pharmacological actions.
- (a) Possess analgesic-antipyretic action.
  - (b) Does not possess anti-inflammatory and anti-rheumatic activity.
  - (c) Its antipyretic effect is due to inhibition of brain prostaglandin synthetase.
  - (d) It has analgesic, antipyretic, anti-inflammatory and anti-rheumatic actions.

Which of the statements given above is/are correct ?

- (1) (a) only
- (2) (a) and (b) only
- (3) (a), (b) and (c) only
- (4) (d) only

- 
28. During which period HBsAg appears before symptoms, peaks during the disease and declines to undetectable levels ?

- (1) 1 - 2 months
- (2) 2 - 3 months
- (3) 3 - 6 months
- (4) 6 - 12 months

- 
29. Which immunoglobulins are responsible for hypersensitivity reactions ?

- (1) Ig E
- (2) Ig A
- (3) Ig M
- (4) Ig G

- 
30. What is the mechanism of action of Streptokinase ?

- (1) Inhibiting platelet aggregation
- (2) Opposing procoagulant action
- (3) Promoting fibrinolysis
- (4) None of the above

- 
31. DOTS strategy can prevent deterioration of the resistance problem by ensuring the patient's compliance in case of the disease \_\_\_\_\_.

- (1) diphtheria
- (2) tuberculosis
- (3) typhoid
- (4) tetanus

- 
32. The detection of endotoxin in body fluid caused by gram negative bacteria is called \_\_\_\_\_ test.

- (1) PAL
- (2) TAL
- (3) LAL
- (4) ENL

- 
33. Sabouraud's agar selects the growth of fungi, because it has \_\_\_\_\_.

- (1) High pH and high glucose concentration
- (2) Low pH and high glucose concentration
- (3) High pH and low glucose concentration
- (4) Low pH and low glucose concentration

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कच्चा कामासाठी जागा /SPACE FOR ROUGH WORK

34. Medium used for production of monoclonal antibodies contains the metabolic inhibitor called :

- (a) Aminopterin
- (b) Tetracyclin
- (c) Streptomycin
- (d) Bacitracin

Which of the statements given above is/are correct ?

- (1) (a) only                      (2) (b) and (d) only    (3) (c) only                      (4) (d) only
- 

35. Which of the following statements is/are true ?

- (a) Higher the oxidizable organic matter, higher is the BOD
- (b) Higher the dissolved oxygen content of water, higher is its BOD
- (c) Waste water treatment reduces BOD
- (d) Waste water treatment increases BOD

Answer Options :

- (1) (a), (b) and (d)    (2) (a), (b) and (c)    (3) (a) and (d)                      (4) (a) and (c)
- 

36. Which of the following parts of the brain is affected by pyrogens ?

- (1) Cerebrum    (2) Cerebellum
  - (3) Hypothalamus                                      (4) Medula oblongata
- 

37. The urease test is used to :

- (1) distinguish Klebsiella from Escherichia
  - (2) distinguish proteus from providencia
  - (3) Identify Helicobacter pylori
  - (4) All the above
- 

38. The IMVic test detects :

- (1) Production of indole from tryptophan
  - (2) Whether citrate can be used as a sole source of carbon
  - (3) Production of acetoin
  - (4) All of the above
- 

कच्चा कामासाठी जागा /SPACE FOR ROUGH WORK



39. Which is the method used to sterilise liquid paraffin, dusting powder, fats and grease ?

- (1) Moist heat      (2) Dry heat      (3) Filtration      (4) Radiation
- 

40. The shape of a bacterial colony depends on :

- (1) Nutrient availability  
(2) Hardness of the agar surface  
(3) Presence of liquid on the medium surface  
(4) All of the above
- 

41. R-plasmids :

- (a) bear genes for antibiotic resistance  
(b) can be transferred from cell to cell  
(c) can carry genes for resistance to several drugs  
(d) are also known as transposons

Which of the above statements are **true** ?

- (1) (a), (b) and (c)      (2) (a), (b), (c) and (d)  
(3) (a), (b) and (d)      (4) (a) and (d)
- 

42. Measles is caused by \_\_\_\_\_.

- (1) Varicella - zoster virus      (2) Variola virus  
(3) Paramyxovirus      (4) Rubella virus
- 

43. The \_\_\_\_\_ are a separate class of synthetic antibacterial compounds that interact with bacterial DNA gyrase and prevent the gyrase from supercoiling bacterial DNA.

- (1) macrolides      (2) quinolones  
(3) salvarsans      (4) cephalosporins
- 

44. Name the detergent that is bactericidal for both gram positive and gram negative, at a very low concentration :

- (1) Hexylresorcinol      (2) Quaternary Ammonium compounds  
(3) Hypochlorites      (4) Ethyl alcohol
- 

कच्चा कामासाठी जागा /SPACE FOR ROUGH WORK

45. If contaminated materials are exposed to boiling water :

- (a) all vegetative cells will be destroyed within minutes
- (b) some bacterial spores will survive for hours
- (c) The materials will be sterilized
- (d) The materials are likely to be disinfected

Which of the above statements are **correct** ?

- |                      |                       |
|----------------------|-----------------------|
| (1) (a) and (b)      | (2) (a), (b) and (d)  |
| (3) (a), (b) and (c) | (4) None of the above |

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46. As per schedule M of the Drugs and Cosmetics Rules, 1945, the Standard Operating Procedures must be retained for at least :

- (1) three months after expiry date of finished product
- (2) three years after manufacturing date of finished product
- (3) one year after manufacturing data of finished product
- (4) one year after expiry date of finished product

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47. Crepe Bandage is used for :

- (a) Giving light support to sprains and strain
- (b) Correctional purpose
- (c) A compression bandage
- (d) To secure dressing and appliance firmly in place

Which of the statements given above are **correct** ?

- |                           |                           |
|---------------------------|---------------------------|
| (1) (a) and (b) only      | (2) (b) and (c) only      |
| (3) (a), (b) and (c) only | (4) (a), (b), (c) and (d) |

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48. Which type of sterile preparations are intended for injection ?

- (a) Solution of medicament
- (b) Dry solid dissolve in suitable vehicle
- (c) Suspension of medicament
- (d) Emulsion of medicament

**Answer Options :**

- |                      |                           |
|----------------------|---------------------------|
| (1) (a) only         | (2) (a) and (b) only      |
| (3) (a) and (c) only | (4) (a), (b), (c) and (d) |

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कच्चा कामासाठी जागा /SPACE FOR ROUGH WORK

49. In DNA replication, Okazaki fragments are synthesized on the :

- (1) leading strand
- (2) lagging strand
- (3) leading strand and lagging strand
- (4) leading strand or lagging strand

50. Testosterone, the male sex hormone, belongs to androstane class, which contains \_\_\_\_\_ number of carbon atoms.

- (1) 19
- (2) 18
- (3) 21
- (4) 27

51. Transcription is a process by which :

- (1) DNA is copied to produce two daughter DNA molecules
- (2) a new progeny is produced
- (3) genetic code is transferred on ribosomes
- (4) genetic message encoded in DNA is copied into RNA

52. Microencapsulation can be done by using following process/es :

- (a) Pan coating
- (b) Spray drying
- (c) Spray congealing
- (d) Coacervation - phase separation

**Answer Options :**

- (1) (a) only
- (2) (b) and (c) only
- (3) (d) only
- (4) (a), (b), (c) and (d)

53. The UV radiation causes transition of valency electron in molecule :

- (a)  $\sigma \rightarrow \sigma^*$
- (b)  $n \rightarrow \sigma^*$
- (c)  $n \rightarrow \pi^*$
- (d)  $\pi \rightarrow \pi^*$

Which of the statements given above is/are correct ?

- (1) (a) only
- (2) (a) and (b) only
- (3) (a), (b) and (c) only
- (4) (a), (b), (c) and (d)

कच्चा कामासाठी जागा /SPACE FOR ROUGH WORK

54. The enzyme that induces negative supercoiling is :

- |                |                |
|----------------|----------------|
| (1) Polymerase | (2) Synthetase |
| (3) Ligase     | (4) Gyrase     |
- 

55. As per GMP requirements :

- (a) Self inspection includes storage of starting material
- (b) Records of changes made in electronic data need not be maintained
- (c) An alteration made must be signed and dated
- (d) All labels must be examined by QC department

**Answer Options :**

- |                      |                 |
|----------------------|-----------------|
| (1) (b), (c) and (d) | (2) (b) and (c) |
| (3) (a), (c) and (d) | (4) (c) and (d) |
- 

56. The nominated and elected members of DTAB hold office for years :

- |       |       |       |       |
|-------|-------|-------|-------|
| (1) 2 | (2) 3 | (3) 4 | (4) 5 |
|-------|-------|-------|-------|
- 

57. \_\_\_\_\_ is a process of converting water from liquid to gaseous form.

- |                  |          |                  |             |
|------------------|----------|------------------|-------------|
| (1) Distillation | (2) R.O. | (3) Purification | (4) Heating |
|------------------|----------|------------------|-------------|
- 

58. Steroids with a lactone ring at C-17 position are called :

- |                     |                        |
|---------------------|------------------------|
| (1) glucocorticoids | (2) cardiac glycosides |
| (3) sapogenins      | (4) oestrogens         |
- 

59. Schedule M consists of :

- (1) GMP for ayurvedic, siddha and unani medicines.
  - (2) Standards for patent or proprietary medicines
  - (3) GMP and requirements of premises, plant and equipment for pharmaceutical product
  - (4) Standards for cosmetics.
- 

कच्चा कामासाठी जागा /SPACE FOR ROUGH WORK

60. The nominated members of DTAB include :

- (a) One person from the Indian Pharmaceutical Association
- (b) One person from the Indian Council of Medical Research
- (c) Drugs Controller of India
- (d) Director of Central Drugs Laboratory

**Answer Options :**

- |                      |                       |
|----------------------|-----------------------|
| (1) (a) and (b) only | (2) (c) and (d) only  |
| (3) all of the above | (4) none of the above |
- 

61. Capping is the term used to describe :

- (1) Partial or complete separation of top or bottom crowns of tablet from main body
  - (2) Separation of tablet into two pieces
  - (3) Separation of tablet into distinct layers
  - (4) None of the above
- 

62. RNA molecules with catalytic activity are called as :

- (a) RNA editors
- (b) RNA enzymes
- (c) Ribozymes
- (d) m-RNA

**Answer Options :**

- |                 |                 |              |              |
|-----------------|-----------------|--------------|--------------|
| (1) (a) and (b) | (2) (b) and (d) | (3) (c) only | (4) (d) only |
|-----------------|-----------------|--------------|--------------|
- 

63. RNA is synthesized from DNA template by enzyme RNA polymerase. Which are :

- (a) Type I polymerase
- (b) Type II polymerase
- (c) Type III polymerase
- (d) Type IV polymerase

Which of the statements given above is/are correct ?

- |                           |                      |
|---------------------------|----------------------|
| (1) (a) only              | (2) (a) and (b) only |
| (3) (a), (b) and (c) only | (4) None             |
- 

कच्चा कामासाठी जागा /SPACE FOR ROUGH WORK

64. Match the limit test with the reagent used for the test :

- |                       |                                |
|-----------------------|--------------------------------|
| (a) Free formaldehyde | (i) Hydroxylamine HCl          |
| (b) Lead              | (ii) Sodium tetraphenyl borate |
| (c) Aluminium         | (iii) Acetylacetone reagent    |
| (d) Potassium         | (iv) Hydroxyquinoline          |

**Answer Options :**

- |     | (a)   | (b)   | (c)   | (d)   |
|-----|-------|-------|-------|-------|
| (1) | (iii) | (i)   | (iv)  | (ii)  |
| (2) | (iv)  | (ii)  | (i)   | (iii) |
| (3) | (ii)  | (iv)  | (iii) | (i)   |
| (4) | (i)   | (iii) | (ii)  | (iv)  |

---

65. The limit test for heavy metals to control metallic impurier convert them into sulphides by giving \_\_\_\_\_ colour.

- |            |         |          |           |
|------------|---------|----------|-----------|
| (1) Yellow | (2) Red | (3) Pink | (4) Brown |
|------------|---------|----------|-----------|

---

66. A HPLC pump which provides unlimited reservoir volumes with pulsating flow is :

- |                        |                            |
|------------------------|----------------------------|
| (1) reciprocating pump | (2) constant pressure pump |
| (3) displacement pump  | (4) syringe type pump      |

---

67. Which of the following is applicable to the HPLC method of analysis ?

- (a) Pressures are about 50 – 350 bar
- (b) The mobile phase can be isocratic or gradient
- (c) Separation factor cannot be defined in terms of ratio of retention factors
- (d) It is a mass transfer process

**Answer Options :**

- |                      |                           |
|----------------------|---------------------------|
| (1) only (b) and (c) | (2) (a), (b) and (d) only |
| (3) (b) only         | (4) all of the above      |

---

68. The Helix type different conformations of DNA are \_\_\_\_\_.

- (1) Right handed (B-DNA), Left handed (Z-DNA)
- (2) Left handed (B-DNA), Left handed (Z-DNA)
- (3) Left handed (B-DNA), Right handed (Z-DNA)
- (4) Right handed (B-DNA), Right handed (Z-DNA)

---

कच्चा कामासाठी जागा /SPACE FOR ROUGH WORK

69. If a functional group which is not in conjugation with any other group in the molecule exhibits absorption in the UV region, it is termed as \_\_\_\_\_.

- |                 |                |
|-----------------|----------------|
| (1) hypsochrome | (2) auxochrome |
| (3) chromophore | (4) auxophore  |

---

70. Water for injection complies to which of the following standards ?

- |  |
|--|
| (1) Bacterial endotoxins nmt 0.25 endotoxin units per mL and total viable count is zero cfu per 100 mL |
| (2) Bacterial endotoxins nmt 0.25 endotoxin units per mL and total viable count is 10 cfu per 100 mL   |
| (3) Bacterial endotoxins nmt 0.1 endotoxin units per mL and total viable count is zero cfu per 100 mL  |
| (4) Bacterial endotoxins nmt zero endotoxin units per mL and total viable count is 10 cfu per 100 mL   |

---

71. The sequence for formation of  $\text{NO}^+$  required for diazotization is :

- |                               |
|-------------------------------|
| (a) acid treatment of nitrite |
| (b) formation of nitrous acid |
| (c) formation of cation       |
| (d) loss of water             |

**Answer Options :**

- |                        |                        |
|------------------------|------------------------|
| (1) (a), (c), (d), (b) | (2) (a), (d), (b), (c) |
| (3) (a), (b), (c), (d) | (4) (b), (c), (d), (a) |

---

72. Identify the **INCORRECT** statement regarding Atomic Absorption Spectroscopy :

- |  |
|--|
| (a) Electrons of the atoms are moved to lower orbitals             |
| (b) Deuterium lamps can be used only for wavelengths 190 to 320 nm |
| (c) Graphite tubes are used as atomisers                           |
| (d) Beer - Lambert's law is not applicable                         |

**Answer Options :**

- |                      |                       |
|----------------------|-----------------------|
| (1) (a) and (d) only | (2) (b) and (c) only  |
| (3) (b) only         | (4) None of the above |

---

कच्चा कामासाठी जागा /SPACE FOR ROUGH WORK

73. The limit for particulate contamination in parental solutions (less than 100 mL) as per I.P. (by light obscuration particle count test) is :

- (1) Particle size equal to or greater than  $10\text{ }\mu\text{m}$  = 2000 per container
  - (2) Particle size equal to or greater than  $25\text{ }\mu\text{m}$  = 100 per container
  - (3) Particle size equal to or greater than  $5\text{ }\mu\text{m}$  = 200 per container
  - (4) Particle size equal to or greater than  $10\text{ }\mu\text{m}$  = 6000 per container
- 

74. Oily injection suffers from following disadvantages :

- (a) They may be too viscous in cold weather
- (b) They often cause pain on injection
- (c) They make syringes and needles difficult to clean
- (d) They must be injected with great care for accidental thrombosis

Which of the statements given above are **correct** ?

- (1) (a), (b) and (c) only
  - (2) (a), (c) and (d) only
  - (3) (a), (b) and (d) only
  - (4) (a), (b), (c) and (d)
- 

75. In tablet manufacturing unequal distribution of colour on a tablet, with light or dark areas standing out in an otherwise uniform surface is called as :

- (1) matting
  - (2) picking
  - (3) mottling
  - (4) lamination
- 

76. As per the Narcotic Drugs and Psychotropic Substances Act, Opium Derivative includes :

- (a) Medicinal and prepared opium
- (b) Preparations containing less than 0.2% morphine
- (c) Preparations containing more than 0.2% morphine
- (d) Phenanthrene alkaloids

Which of the statements given above is/are **correct** ?

- (1) (a) only
  - (2) (a), (c), (d)
  - (3) (a), (b), (c)
  - (4) All the above
- 

77. Formulations have been brought under price control through DPCO 2013 based on \_\_\_\_\_.

- (1) National List of Essential Medicines - 2011
  - (2) Indian Pharmacopoeia
  - (3) Schedule H
  - (4) Drugs and Cosmetics Act.
- 

कच्चा कामासाठी जागा /SPACE FOR ROUGH WORK



78. According to Food Safety and Standard Act, Functional Foods are classified into various types. Which of the following statements is **incorrect** ?

- (1) Foods for Special and Dietary uses : means Functional Foods for oral and parenteral administration.
- (2) Nutraceuticals contain recommended amount of minerals, Vitamines, Proteins, Co-enzymes etc.
- (3) Organic Food means Food ingredients produced as per specified organic standards
- (4) Proprietary and novel food means foods for which standards have not been specified but it is not unsafe.

---

79. Right to information act, 2005, specifies time limits for replying to the request, which of the following statements is **incorrect** ?

- (1) If the request has been made to the public information officer, the reply is to be given within 30 days of receipt.
- (2) If the request is made to the Assistant Public Information Officer, the reply is to be given within 35 days of receipt.
- (3) Information concerning corruption and Human Right Violations by Scheduled Security Agencies - the information must be given within 45 days but with the prior approval of Central Information Commission.
- (4) If life or liberty of any person is involved Public Information Officer is expected to reply in 48 days.

---

80. Functions of laboratory in respect which drugs are carried out at Central Research Institute ?

- (1) Toxins, antitoxins
- (2) Vaccines, sera, serum proteins
- (3) Sterilized ligature and sutures
- (4) All of the above

---

81. The USFDA approved new extended release injectable suspension for the treatment of adults with schizophrenia is :

- (1) Promazine Hydrochloride
- (2) Aripiprazole Lauroxil
- (3) Levodopa
- (4) Xipamide

---

कच्चा कामासाठी जागा /SPACE FOR ROUGH WORK

82. The term neuroceutical was coined from words, Nutrition and Pharmaceutical by which of the following scientists ?

- |                      |                   |
|----------------------|-------------------|
| (1) Stephen Defelice | (2) John Fredrick |
| (3) Michael Tswett   | (4) Van Deemter   |

---

83. An import licence is subject to the following conditions :

- (a) The manufacturer shall at all times observe the undertaking given by him or on his behalf in Form 9.
- (b) The licence shall allow authorized inspector of the licensing authority to enter premises where the imported substances are stocked to inspect for testing or taking samples.
- (c) The licensee shall furnish if required to the licensing authority full protocols of the test, which have been applied.
- (d) The licensee shall maintain record of all sales made by him of substances of import for which licence is required.

**Answer Options :**

- |                        |                        |
|------------------------|------------------------|
| (1) (b), (c), (d) only | (2) (a), (b), (c), (d) |
| (3) (c), (d) only      | (4) (a), (b) only      |

---

84. With what is National Vector Born Disease control programme related ?

- |            |          |            |              |
|------------|----------|------------|--------------|
| (1) Cancer | (2) AIDS | (3) Dengue | (4) Deafness |
|------------|----------|------------|--------------|

---

85. The Central Drug Laboratory and its functions are given below. Identify the **incorrect** statement :

- (1) The function related to vaccines, sera, antigens class shall be exercised by the Director, Central Research Institute, Kasauli.
- (2) The function related to Intra Uterine devices and Falop Rings class shall be carried out in Central Drug Testing Lab, Thane.
- (3) The function of the director, in respect of Oral Polio vaccine shall be exercised by Laboratory of serology, Calcutta.
- (4) The function of the laboratory in respect of the condom, shall be carried out at Central Indian Pharmacopoeia, Laboratory, Ghaziabad.

---

कच्चा कामासाठी जागा /SPACE FOR ROUGH WORK

86. Which of the following statements is/are **correct** with respect to National List of Essential Medicines - 2011 (NLEM) ?

- (a) A total 348 medicines are present in NLEM-2011.
- (b) 181 medicines fall under category of primary, secondary and tertiary levels.
- (c) 106 medicines fall under the category of secondary and tertiary levels.
- (d) 61 medicines fall under the category of tertiary levels.

**Answer Options :**

- (1) (a), (b) only
- (2) (c), (d) only
- (3) All the above
- (4) None of the above

---

87. Neutraceuticals are \_\_\_\_\_.

- (1) Any substance or substances used in treating diseases or illness.
- (2) Any product derived from food sources with extra health benefits in addition to basic nutritional value in food.
- (3) The products with biologically active ingredients purporting to have medical or drug like benefits.
- (4) Compounds manufactured for use in and as medicinal drug.

---

88. ICH quality guidelines related to Development and Manufacturing of drug substances are documented under the name of :

- (1) Q 1
- (2) Q 2
- (3) Q 11
- (4) Q 10

---

89. Who can apply for Registration of Import of cosmetics ?

- (a) Manufacture himself having registered office in India.
- (b) Authorised Agent of manufacturer
- (c) Subsidiary of manufacturer
- (d) Any other importer

**Options :**

- (1) Only (a) and (b)
- (2) Only (b) and (c)
- (3) Only (c) and (d)
- (4) All (a), (b), (c), (d)

---

कच्चा कामासाठी जागा /SPACE FOR ROUGH WORK

P.T.O.

90. Some of the Acts/orders and their years of enactment are given below. Which one of them is **incorrectly** paired ?

- (a) Drugs and magic Remedies Act - 1954.
- (b) Drugs Price Control Order - 1995.
- (c) Pharmacy Act - 1948
- (d) Poison Act - 2010

**Answer Options :**

- (1) (a), (b) only      (2) (c), (d) only      (3) (d) only      (4) (c) only
- 

91. Accidental intoxication from the use and manufacturing of organophosphorous compounds can be cured with drugs belonging to following class of organic compounds :

- (a) Hydroxyl amines      (b) Alcohols
- (c) Hydroxamic acids      (d) Oximes

Which of the above options are **true** ?

- (1) (a), (b) and (c)      (2) (a), (c) and (d)  
(3) (a), (b) and (d)      (4) (b), (c) and (d)
- 

92. As per Drugs and Magic Remedies Act 1954 and Rules 1955, Magic remedy is anything that claims to possess miraculous power. These include :

- (a) Cosmetics      (b) Mantra      (c) Kavacha      (d) Talisman

**Answer Options :**

- (1) (a), (b) and (d)      (2) (a), (b) and (c)  
(3) (b), (c) and (d)      (4) (a), (c) and (d)
- 

93. Drugs and Cosmetics Act, gives details about even labelling of medicine. The container of medicine for internal use shall :

- (a) If it contains substance specified in schedule G, be labelled with the word caution - It is dangerous to take preparation except under medical supervision.
- (b) If contents are specified in schedule H, labelled with symbol  $R_X$ .
- (c) If contents specified in schedule H and comes within purview of Narcotic Drugs and Psychotropic substances Act, labelled with symbol  $XR_X$ .
- (d) If contents are specified in schedule X, labelled with symbol  $NR_X$

Which of the above labelling instructions are appropriate ?

- (1) (a) only      (2) (a), (b) only  
(3) (c), (d) only      (4) All the above
- 

कच्चा कामासाठी जागा /SPACE FOR ROUGH WORK

94. Study the following dialogue and choose appropriate option :

**Rikesh :** My Green Road Public-Private Project is expected to cut amount of bitumen imported from other country by 40% and also cut the amount of plastic waste going into landfills by 30-40% as I have decided to use mixture of bitumen and waste plastic to construct blacktop of the roads. I am experimenting with the material now.

**Ramesh :** Instead of burning, recycling of plastic is the correct solution for managing quality of air in the environment. But one needs to study the effect of this mixture on environment due to formation of dust that might be produced due to fluctuation of temperature and heavy rain.

- (1) Ramesh is discouraging Rikesh to make use of plastic waste for constructing black top though his is a cost saving solution of managing plastic waste without causing air pollution.
- (2) Ramesh is cautioning Rikesh about environmental hazards that might be produced by mixture of bitumen and plastic, though it is an environment friendly way of managing waste.
- (3) Ramesh is offering Rikesh a help for studying effect of this mixture on the environment as he knows that it is a good use of plastic waste.
- (4) Ramesh is endorsing Rikesh's efforts of studying the effects of mixture on the environment as he is offering a good solution for recycling plastic.

95. Shree Satyababa speaks truth only on a particular day of the week regularly. One day he said, "I lie on Mondays or Tuesdays". Next day he said, "Today is either Sunday or Saturday or Thursday". Next day he said, "I lie on Fridays or Wednesdays". Select the day from the options on which Satyababa speaks the truth.

- (1) Tuesday                      (2) Wednesday                      (3) Thursday                      (4) Friday

96. A school tennis coach is requested to select a team of four players for the state level tournaments. School is having eight students of equal capacities. As per rules there should be at least two male members in the team. There are boys, E, F, G, H and girls, O, P, U, R. But there is a problem while selecting. F always avoids playing with O. H is a rude person and coach thinks that he needs some time to change his behaviour after counselling. G picks up the fight with R without any reason at any time. U fails to play with confidence when her elder brother E is in the team.

Select the logically false statement.

- (1) If E and G are selected then O and P can be members of the team.
- (2) If U and P are selected then F and G can be members of the team.
- (3) If H is given needed counselling it is possible to select any two of the four girls.
- (4) If P and R are selected there would not be any problem for selecting E and F.

कच्चा कामासाठी जागा /SPACE FOR ROUGH WORK

P.T.O.

97. To every problem there is at least one solution.

Choose the option that is **not** possible if above statement is true.

- (1) If there is problem then there is solution.
- (2) The group discussed the problems but did not get solution.
- (3) Group found solution though there was no problem.
- (4) They have solution that is not related to any problem.

98. Choose appropriate alternatives for replacing question marks in the following sequence.

8, 12, 14, 21, 22, 33, ?, ?, 44, 66

- (1) 33, 55
- (2) 32, 48
- (3) 32, 55
- (4) 33, 48

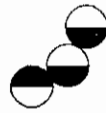
99. Identical relationship exists between images (a) - (b) and (c) - (d). Choose most logical pair of images for places (b) and (c).



(a)

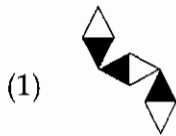
(b)

(c)

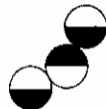


(d)

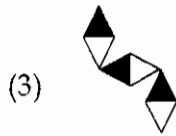
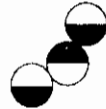
**Answer Options :**



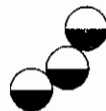
(1)



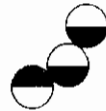
(2)



(3)



(4)



कच्चा कामासाठी जागा /SPACE FOR ROUGH WORK

100. Three students Mani, Yusuf and Nima share their books for reading. Mani lent his books to Yusuf and Nima as many as they had already. After one month Yusuf lent his books to Mani and Nima as many as they had. After two months Nima lent her books to Mani and Dev as many as they had. At final transaction each one of them had 24 books. Select the set of numbers that indicates books respectively that Mani, Dev and Nima originally had.

- (1) 42, 12, 21      (2) 39, 12, 21      (3) 39, 21, 12      (4) 6, 42, 24
- 

- o 0 o -

कच्च्या कामासाठी जागा /SPACE FOR ROUGH WORK

### सूचना — (पृष्ठ 1 वरून पुढे....)

- (8) प्रश्नपुस्तिकेमध्ये विहित केलेल्या विशिष्ट जागीच कच्चे काम (रफ वर्क) करावे. प्रश्नपुस्तिकेव्यतिरिक्त उत्तरपत्रिकेवर वा इतर कागदावर कच्चे काम केल्यास ते काँपी करण्याच्या उद्देशाने केले आहे, असे मानले जाईल व त्यानुसार उमेदवारावर शासनाने जारी केलेल्या “परीक्षांमध्ये होणाऱ्या गैरप्रकारांना प्रतिबंध करण्याबाबतचे अधिनियम-82” यातील तरतुदीनुसार कारवाई करण्यात येईल व दोषी व्यक्ती कमाल एक वर्षाच्या कारावासाच्या आणि/किंवा रुपये एक हजार रकमेच्या दंडाच्या शिक्षेस पात्र होईल.
- (9) सदर प्रश्नपत्रिकेसाठी आयोगाने विहित केलेली वेळ संपल्यानंतर उमेदवाराला ही प्रश्नपुस्तिका स्वतःबरोबर परीक्षाकक्षाबाहेर घेऊन जाण्यास परवानगी आहे. मात्र परीक्षा कक्षाबाहेर जाण्यापूर्वी उमेदवाराने आपल्या उत्तरपत्रिकेचा भाग-1 समवेक्षकाकडे न विसरता परत करणे आवश्यक आहे.

### नमुना प्रश्न

प्र. क्र. 201. “अंगावर काटा उभा रहाणे” या वाक्यप्रचाराचा अर्थ काय ?

- |                      |                   |
|----------------------|-------------------|
| (1) अंग शहारणे       | (2) रोमांचित होणे |
| (3) अतिशय भिती वाटणे | (4) बहरून येणे    |

ह्या प्रश्नाचे योग्य उत्तर “(3) अतिशय भिती वाटणे” असे आहे. त्यामुळे या प्रश्नाचे उत्तर “(3)” होईल, यास्तव खालीलप्रमाणे प्रश्न क्र. 201 समोरील उत्तर-क्रमांक “③” हे वर्तुळ पूर्णपणे छायांकित करून दाखविणे आवश्यक आहे.

प्र. क्र. 201. ① ② ● ④

अशा पद्धतीने प्रस्तुत प्रश्नपुस्तिकेतील प्रत्येक प्रश्नाचा तुमचा उत्तरक्रमांक हा तुम्हाला स्वतंत्ररीत्या पुरविलेल्या उत्तरपत्रिकेवरील त्या त्या प्रश्नक्रमांकासमोरील संबंधित वर्तुळ पूर्णपणे छायांकित करून दाखवावा. ह्याकरिता फक्त काळ्या शाईचे बॉलपेन वापरावे, पेन्सिल वा शाईचे पेन वापरू नये.

कच्च्या कामासाठी जागा /SPACE FOR ROUGH WORK