

Set No. : 1

00011

RET/15/TEST-B

35

Question Booklet No.

610

Kriya Sharir

(To be filled up by the candidate by blue/black ball point pen)

Roll No.

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Roll No. (Write the digits in words)

Serial No. of OMR Answer Sheet

Day and Date

(Signature of Invigilator)

INSTRUCTIONS TO CANDIDATES

(Use only blue/black ball-point pen in the space above and on both sides of the Answer Sheet)

1. Within 10 minutes of the issue of the Question Booklet, Please ensure that you have got the correct booklet and it contains all the pages in correct sequence and no page/question is missing. In case of faulty Question Booklet, Bring it to the notice of the Superintendent/Invigilators immediately to obtain a fresh Question Booklet.
2. Do not bring any loose paper, written or blank, inside the Examination Hall *except the Admit Card without its envelope.*
3. *A separate Answer Sheet is given. It should not be folded or mutilated. A second Answer Sheet shall not be provided.*
4. Write your Roll Number and Serial Number of the Answer Sheet by pen in the space provided above.
5. *On the front page of the Answer Sheet, write by pen your Roll Number in the space provided at the top, and by darkening the circles at the bottom. Also, wherever applicable, write the Question Booklet Number and the Set Number in appropriate places.*
6. *No overwriting is allowed in the entries of Roll No., Question Booklet No. and Set No. (if any) on OMR sheet and Roll No. and OMR sheet no. on the Question Booklet.*
7. *Any change in the aforesaid entries is to be verified by the invigilator, otherwise it will be taken as unfair means.*
8. *This Booklet contains 40 multiple choice questions followed by 10 short answer questions. For each MCQ, you are to record the correct option on the Answer Sheet by darkening the appropriate circle in the corresponding row of the Answer Sheet, by pen as mentioned in the guidelines given on the first page of the Answer Sheet. For answering any five short Answer Questions use five Blank pages attached at the end of this Question Booklet.*
9. For each question, darken only **one** circle on the Answer Sheet. If you darken more than one circle or darken a circle partially, the answer will be treated as incorrect.
10. *Note that the answer once filled in ink cannot be changed. If you do not wish to attempt a question, leave all the circles in the corresponding row blank (such question will be awarded zero marks).*
11. For rough work, use the inner back pages of the title cover and the blank page at the end of this Booklet.
12. *Deposit both OMR Answer Sheet and Question Booklet at the end of the Test.*
13. You are not permitted to leave the Examination Hall until the end of the Test.
14. If a candidate attempts to use any form of unfair means, he/she shall be liable to such punishment as the University may determine and impose on him/her.

Total No. of Printed Pages : 20

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ROUGH WORK

No. of Questions : 50

Time : 2 Hours

Full Marks : 200

- Note: (1)** This Question Booklet contains **40** Multiple Choice Questions followed by **10** Short Answer Questions.
- (2)** Attempt as many MCQs as you can. Each MCQ carries **3 (Three)** marks. **1 (One)** mark will be deducted for each incorrect answer. **Zero** mark will be awarded for each unattempted question. If more than one alternative answers of MCQs seem to be approximate to the correct answer, choose the closest one.
- (3)** Answer only **5** Short Answer Questions. Each question carries **16 (Sixteen)** marks and should be answered in **150-200** words. Blank **5 (Five)** pages attached with this booklet shall only be used for the purpose. Answer each question on separate page, after writing Question No.

01. "Anubandha" is the synonym of :

- | | |
|-----------|--------------|
| (1) Satwa | (2) Atma |
| (3) Ayu | (4) Shareera |

02. Rodhana comes under :

- | | |
|------------------|---------------------|
| (1) Parada dosha | (2) Parada samskara |
| (3) Rasa pujana | (4) Rasa gathi |

03. No plants survive in the surrounding of this species :

- | | |
|----------------|------------------|
| (1) Ahiphena | (2) Vishatinduka |
| (3) Vatsanabha | (4) Dhatura |

04. Mahaguda is a variety of :

- | | |
|--------------------|-------------------|
| (1) Prameha pidaka | (2) Kaphaja Krimi |
| (3) Guda vidradhi | (4) Bhagandhara |

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05. "Jentaka" is the sweda of choice in which of the following ritu ?

- | | |
|--------------|--------------|
| (1) Vasanta | (2) Varsha |
| (3) Greeshma | (4) Hemantha |

06. Charakopskara commentary on Charaka Samhita was written by :

- | | |
|----------------------|--------------------|
| (1) Shivadas Sen | (2) Gangadhara Rai |
| (3) Yogendranath Sen | (4) Chakrapani |

07. In suspected Arsenic poison which part of the body is particularly preserved for chemical analysis ?

- | | |
|-----------|----------------|
| (1) Heart | (2) Long bones |
| (3) Skin | (4) Whole body |

08. All of the following diseases are transmitted by faeco-oral route EXCEPT :

- | | |
|-----------------|-------------------|
| (1) Cholera | (2) Poliomyelitis |
| (3) Hepatitis A | (4) Hookworm |

09. The most radio-sensitive tissue is :

- | | |
|-------------|-----------------|
| (1) Brain | (2) Bone marrow |
| (3) Thyroid | (4) Liver |

10. Which of the following is Vishishta purvaroop of Vataja Jwara ?

- | | |
|----------------|--------------|
| (1) Angamarda | (2) Jrimbha |
| (3) Agnimandya | (4) Aswedata |

11. “अच्छम् इति अघनम्” is the description found in the commentary authored by the following commentator in the context of अच्छ पित्त
- (1) Dalhana
 - (2) Cakrapāṇi
 - (3) Aruṇadatta
 - (4) Kāśyapa
12. स्वल्पापचारमपि यो न सहते is the description of :
- (1) Kapha Prakṛti Puruṣa
 - (2) Mandāgni
 - (3) Viṣamāgni
 - (4) Vāta Prakṛti Puruṣa
13. The individuals who have unctuous urine, sweat, voice, possessing large sized body and who are intolerant to hard work are
- (1) Meda Sāra Puruṣa
 - (2) Kapha Prakṛti Puruṣa
 - (3) Majjā Sāra Puruṣa
 - (4) Meda Vṛddha Puruṣa
14. अतिवर्णोऽतिमेधावी स्वप्ने पावक हक् तथा are the features of which of the following
- (1) Pitta Prakṛti Puruṣa
 - (2) Vāta Prakṛti Puruṣa
 - (3) Tīkṣṇāgni Puruṣa
 - (4) Rakta Sāra Puruṣa

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- 15.** Praspandana, Udvahana, Pūraṇa, Viveka and Dhāraṇa as the normal functions of Vāta has been described by Ācārya
- (1) Suśruta
 - (2) Bhela
 - (3) Śārṅadhara
 - (4) Caraka
- 16.** When the donor red cells are treated with the recipient plasma, it is known as
- (1) Minor cross match
 - (2) Major cross match
 - (3) Landsteiner Law
 - (4) Rh incompatibility
- 17.** Which one of the following is not antithyroid substance ?
- (1) Thiocynate
 - (2) Propylthiouracil
 - (3) Iodides in high concentration
 - (4) Iodides in low concentration
- 18.** Inability to recognize face is known as
- (1) Prosopagnosia
 - (2) Dyslexia
 - (3) Dyskinesia
 - (4) Aphasia
- 19.** Vessels are elastic and forward blood flow is continuous because of recoil during diastole. This recoiling effect is known as
- (1) Wind kessel effect
 - (2) Wolf Chaikoff effect
 - (3) Law of Laplace
 - (4) Addisonian crisis

20. रौक्ष्यं श्रमः शोषो ग्लानिः शब्दाऽसहिष्णुता are the features of
- (1) Rakta Kṣaya
 - (2) Majjā Kṣaya
 - (3) Rasa Kṣaya
 - (4) Śukra Kṣaya
21. If the electrical potentials of any two of the three bipolar limb electrocardiographic leads are known at any given instance, the third one can be determined mathematically by simply summing the first two. This is known as
- (1) Fremingham Law
 - (2) Henry's Law
 - (3) Einthoven's Law
 - (4) Boyle's Law
22. *Smṛti* is the function of
- (1) Apāna Vāyu
 - (2) Udāna Vāyu
 - (3) Vyāna Vāyu
 - (4) Alocaka Pitta
23. As per *Suśruta*, the Mūla of *Mūtravaha Srotas* are
- (1) Vasti & Meḍhra
 - (2) Vasti & Vañkṣaṇa
 - (3) Vṛkka & Vañkṣaṇa
 - (4) Vṛkka & Vasti

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24. Folic Acid is antagonized by

- (1) Methotrexate
- (2) Avidin
- (3) Isoniazid
- (4) Dicoumarol

25. Neuritis is not a manifestation of the deficiency of

- (1) Vitamin B1
- (2) Vitamin B12
- (3) Panthathenic Acid
- (4) Vitamin D

26. The difference between PubMed and PubMed Central (PMC) is :

- (1) PubMed records provide only title of the article, whereas PMC provides the abstract also.
- (2) PubMed records provide only the title of the article, author details, journal details, abstract and keywords where as PMC provides the full text of the article for downloading
- (3) PMC records provide only the title of the article, author details, journal details, abstract and keywords whereas PubMed Provides the full text of the article.
- (4) All full-text articles indexed in PubMed are available for downloading, but all fulltext article on PMC are not available for downloading.

27. Impact Factor of a scholarly journal is defined as :
- (1) Total number of citations the journal has received in the past two years
 - (2) The average number of citations each published article has received in the past two years
 - (3) The maximum number of citations a published article has received in last two years
 - (4) The average number of citations the journal has received in the past five years
28. Identify the statement that is wrong in relation to खालित्य (khālitya) and पालित्य (Palitya):
- (1) They manifest in people who involve in excessive exertion, excessive fasting and intake of excessive cold substances.
 - (2) They manifest in people who consume excessive लवण (Lavaṇa)
 - (3) They manifest in people who belong to पित्त प्रकृति- (pitta constitution)
 - (4) चरकोक्त कनकारिष्ट- (Carakokta Kanakāriṣṭa) is used to treat these manifestations.
29. Which of the following statements is correct according to WHO ?
- (1) BMI greater than or equal to 35 is overweight.
 - (2) BMI greater than or equal to 18 is overweight and a BMI greater than or equal to 25 is obesity.
 - (3) BMI greater than or equal to 25 is grade-1 obesity and a BMI greater than or equal to 30 is morbid obesity.
 - (4) BMI greater than or equal to 25 is overweight and a BMI greater than or equal to 30 is obesity.

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- 30.** Isolated systolic hypertension may be seen in which of the following conditions :
- (1) Hypothyroidism and obesity
 - (2) Hyperparathyroidism and associated depression
 - (3) Stiffening of aorta and Hyperthyroidism
 - (4) Reno-vascular hypertension due to diabetic nephropathy
- 31.** Following are the locations of समान वायु (Samāna Vāyu) :
- (1) Adjacent to Jaṭharāgni, Aṃbuvaha Srotāṃsi and Kosṭha
 - (2) Adjacent to Hṛdaya and Raktava Srotāṃsi and Āmāśaya
 - (3) Adjacent to Prāṇa and Śukravaha Srotāṃsi and Vṛṣaṇa
 - (4) Adjacent to Indriya and Monovaha Srotāṃsi and Garbhāśaya
- 32.** What is the mean arterial pressure if the systolic BP is 160 mm of Hg and diastolic BP is 100 mm of Hg ?
- (1) 134 mm of Hg
 - (2) 120 mm of Hg
 - (3) 102 mm of Hg
 - (4) 140 mm of Hg
- 33.** What is the stroke volume of an adult male individual if the minute cardiac output is 10 litres and the heart rate is 120 beats per minute ?
- (1) About 70 ml
 - (2) About 100 ml
 - (3) About 120 ml
 - (4) About 85 ml

34. Slow, deep breathing is more efficient than rapid, shallow breathing because :

- (1) AVR (ml/min) = frequency (Breaths/min)× (Tidal Volume + Dead space)
- (2) AVR (ml/min) = frequency (Breaths/min)× (Expiratory reserve Volume)
- (3) AVR (ml/min) = frequency (Breaths/min)× (Tidal Volume - Dead space)
- (4) AVR (ml/min) = frequency (Breaths/min)× (Inspiratory Reserve Volume)

35. Read the following statements and answer the question that follows

- a. Jvara cannot manifest without Pitta Vṛddhi.
- b. Vāgbhaṭa has not listed Santāpa/Jvara under Pitta Vṛddhi features
- c. Vāgbhaṭa has described the role of Pitta Vṛddhi under Jvara Saṃprāpti.

Which of the following is correct on the basis of the above statements ?

- (1) The list of symptoms given under Pitta Vṛddhi is complete and the description of Jvara Saṃprāpti is questionable.
- (2) Jvara can manifest even without the involvement of Pitta.
- (3) The list of symptoms given under Pitta Vṛddhi is not complete : it is only indicative. The description of Jvara Saṃprāpti is correct.
- (4) The statements given in the question are wrong. Vāgbhaṭa has listed Jvara under the features of Pitta Vṛddhi.

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- 36.** The utilization of oxygen by metabolic processes is correctly referred to as
- (1) Respiration
 - (2) Ventilation
 - (3) External respiration
 - (4) Cellular respiration
- 37.** The main force causing the exhalation of air is the
- (1) Contraction of diaphragm
 - (2) Elastic recoil
 - (3) Diaphragmatic relaxation
 - (4) Intercostal muscles
- 38.** Steroid hormones bind to
- (1) Carbohydrate receptors on the cell membrane of the target cell
 - (2) Carbohydrate receptors in the cytoplasm of the target cell
 - (3) Protein receptors in the cytoplasm of the target cell
 - (4) Protein receptors in the cytoplasm or nucleus of the target cell
- 39.** The nervous system regulates the secretion of each of these hormones EXCEPT
- (1) Oxytocin
 - (2) Calcitonin
 - (3) ADH
 - (4) Epinephrine
- 40.** Beta-2 adrenergic receptors are found in the following structures :
- (1) Neuromuscular junction
 - (2) Bronchial smooth muscle
 - (3) Urinary bladder
 - (4) Adipose cells

Short Answer Questions

Note : Attempt any **five** questions. Write answer in **150-200** words. Each question carries **16** marks. Answer each question on separate page after writing Question Number.

1. Describe the physiology of digestion and metabolism as per Ayurveda classical textbooks and its relevance in today's context.
2. Discuss the issue of Plagiarism in the context of scholarly publishing and discuss the methods of detecting it.
3. Describe the methods of calculating the sample size for different kinds of studies.
4. Explain *Kedari-Kulyā Nyāya* and *Khale-Kapota Nyāya*. Discuss the possible application of these two theories in terms of clinical physiology.
5. Translate the following verse into English/Hindi, interpret its meaning in terms of clinical physiology with special reference to *Medha Kṣaya* and *Rakta Vṛddhi* :
प्लीहवृद्धिर्द्विविधा- सङ्क्षोभादिच्युतस्य वा वद्धिः,
अच्युतस्य वा शोणितवद्ध्या वद्धिर्भवति ।
6. Translate the following verse into English/Hindi, interpret its meaning with special reference to “बहवबद्धं मेदो” in terms of applied physiology of *Prameha*, keeping in view the disturbances in fat metabolism observed in diabetes mellitus.
बहवबद्धं मेदो मांसं शरीरजक्लेदः शुक्रं शोणितं वसा मज्जा लसीका रसश्चौजः
सङ्ख्यात इति दूष्यविशेषाः ॥

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7. Translate the following verse into English/Hindi, interpret its meaning in terms of applied physiology of Ischemic Heart Disease keeping in view the physiology of Rasa and Vāyu :
कफपित्तावरुद्धस्तु मारुतो रसमूर्च्छितः। हृदिस्थः कुरुते शूलमुच्छ्वासरोधकं परम्।
स हृच्छूल इति ख्यातो रसमारुतसम्भवः।
8. Discuss the natural biological rhythms as described in Ayurveda textbooks. Compare these descriptions with the recent trends in chronobiology.
9. What do you mean by gut microbiota ? Discuss the singificance of recent advances in the knowledge related to gut microbiota with special reference to Ayurvdea physiology.
10. Explain concept of Immunity as described in *Ayurveda* with special reference to Ojas, Bala and Śleṣmā.

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अभ्यर्थियों के लिए निर्देश

(इस पुस्तिका के प्रथम आवरण पृष्ठ पर तथा उत्तर-पत्र के दोनों पृष्ठों पर केवल नीली-काली बाल-प्वाइंट पेन से ही लिखें)

1. प्रश्न पुस्तिका मिलने के 10 मिनट के अन्दर ही देख लें कि प्रश्नपत्र में सभी पृष्ठ मौजूद हैं और कोई प्रश्न छूटा नहीं है। पुस्तिका दोषयुक्त पाये जाने पर इसकी सूचना तत्काल कक्ष-निरीक्षक को देकर सम्पूर्ण प्रश्नपत्र की दूसरी पुस्तिका प्राप्त कर लें।
2. परीक्षा भवन में लिफाफा रहित प्रवेश-पत्र के अतिरिक्त, लिखा या सादा कोई भी खुला कागज साथ में न लायें।
3. उत्तर-पत्र अलग से दिया गया है। इसे न तो मोड़ें और न ही विकृत करें। दूसरा उत्तर-पत्र नहीं दिया जायेगा। केवल उत्तर-पत्र का ही मूल्यांकन किया जायेगा।
4. अपना अनुक्रमांक तथा उत्तर-पत्र का क्रमांक प्रथम आवरण-पृष्ठ पर पेन से निर्धारित स्थान पर लिखें।
5. उत्तर-पत्र के प्रथम पृष्ठ पर पेन से अपना अनुक्रमांक निर्धारित स्थान पर लिखें तथा नीचे दिये वृत्तों को गाढ़ा कर दें। जहाँ-जहाँ आवश्यक हो वहाँ प्रश्न-पुस्तिका का क्रमांक तथा सेट का नम्बर उचित स्थानों पर लिखें।
6. ओ० एम० आर० पत्र पर अनुक्रमांक संख्या, प्रश्नपुस्तिका संख्या व सेट संख्या (यदि कोई हो) तथा प्रश्नपुस्तिका पर अनुक्रमांक और ओ० एम० आर० पत्र संख्या की प्रविष्टियों में उपरिलेखन की अनुमति नहीं है।
7. उपर्युक्त प्रविष्टियों में कोई भी परिवर्तन कक्ष निरीक्षक द्वारा प्रमाणित होना चाहिये अन्यथा यह एक अनुचित साधन का प्रयोग माना जायेगा।
8. प्रश्न-पुस्तिका में प्रत्येक प्रश्न के चार वैकल्पिक उत्तर दिये गये हैं। प्रत्येक प्रश्न के वैकल्पिक उत्तर के लिए आपको उत्तर-पत्र की सम्बन्धित पंक्ति के सामने दिये गये वृत्त को उत्तर-पत्र के प्रथम पृष्ठ पर दिये गये निर्देशों के अनुसार पेन से गाढ़ा करना है।
9. प्रत्येक प्रश्न के उत्तर के लिए केवल एक ही वृत्त को गाढ़ा करें। एक से अधिक वृत्तों को गाढ़ा करने पर अथवा एक वृत्त को अपूर्ण भरने पर वह उत्तर गलत माना जायेगा।
10. ध्यान दें कि एक बार स्याही द्वारा अंकित उत्तर बदला नहीं जा सकता है। यदि आप किसी प्रश्न का उत्तर नहीं देना चाहते हैं, तो संबंधित पंक्ति के सामने दिये गये सभी वृत्तों को खाली छोड़ दें। ऐसे प्रश्नों पर शून्य अंक दिये जायेंगे।
11. रफ कार्य के लिए प्रश्न-पुस्तिका के मुखपृष्ठ के अंदर वाला पृष्ठ तथा उत्तर-पुस्तिका के अंतिम पृष्ठ का प्रयोग करें।
12. परीक्षा के उपरान्त केवल ओ एम आर उत्तर-पत्र परीक्षा भवन में जमा कर दें।
13. परीक्षा समाप्त होने से पहले परीक्षा भवन से बाहर जाने की अनुमति नहीं होगी।
14. यदि कोई अभ्यर्थी परीक्षा में अनुचित साधनों का प्रयोग करता है, तो वह विश्वविद्यालय द्वारा निर्धारित दंड का/की, भागी होगा/होगी।