

Set No. : 1

2016.

Question Booklet No.

RET/16/TEST-B

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 30 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 : 24

29.

ROUGH WORK

रफ़ कार्य

Research Entrance Test-2016

No. of Questions : 50

प्रश्नों की संख्या : 50

Time : 2 Hours

Full Marks : 200

समय : 2 घण्टे

पूरांक : 200

Note: (1) This Question Booklet contains **40** Multiple Choice Questions followed by **10** Short Answer Questions.

इस प्रश्न पुस्तिका में **40** वस्तुनिष्ठ व **10** लघु उत्तरीय प्रश्न हैं।

(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 given for an attempted question. If more than one alternative answers of MCQs seem to be approximate to the correct answer, choose the closest one.

अधिकाधिक वस्तुनिष्ठ प्रश्नों को हल करने का प्रयत्न करें। प्रत्येक वस्तुनिष्ठ प्रश्न **3 (तीन)** अंकों का है। प्रत्येक गलत उत्तर के लिए **1 (एक)** अंक काटा जायेगा। प्रत्येक अनुत्तरित प्रश्न का प्राप्तांक शून्य होगा। यदि वस्तुनिष्ठ प्रश्नों के एकाधिक वैकल्पिक उत्तर सही उत्तर के निकट प्रतीत हों, तो निकटतम सही उत्तर दें।

(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.

केवल **5 (पाँच)** लघुउत्तरीय प्रश्नों के उत्तर दें। प्रत्येक प्रश्न **16 (सोलह)** अंकों का है तथा उनका उत्तर **150-200** शब्दों के बीच होना चाहिए। इसके लिए इस पुस्तिका में लगे हुए सादे **5 (पाँच)** पृष्ठों का ही उपयोग आवश्यक है। प्रत्येक प्रश्न का उत्तर एक नए पृष्ठ से, प्रश्न संख्या लिखकर शुरू करें।

01. The redactor of Agnivesha Tantra is :

- | | |
|----------------|----------------|
| (1) Dalhana | (2) Charaka |
| (3) Chakrapani | (4) Dridhabala |

02. The first samhita to describe Phirangaroga :

- | | |
|---------------------------|---------------------------|
| (1) Sharangadhara Samhita | (2) Charaka Samhita |
| (3) Sushruta Samhita | (4) Bhava Prakash Samhita |

03. Rashi Purusha is associated with :

- | | |
|---------------|---------------|
| (1) 24 Tatvas | (2) 20 Tatvas |
| (3) 4 Tatvas | (4) 2 Tatvas |

04. The number of Tantra yuktis is :

- | | | | |
|--------|--------|--------|--------|
| (1) 42 | (2) 36 | (3) 58 | (4) 60 |
|--------|--------|--------|--------|

05. Kanaka is the synonym of :

- | | |
|-------------------|--------------|
| (1) Swarnaksheeri | (2) Chitraka |
| (3) Dhatura | (4) Haritaki |

06. The number of gunas of a visha is :

- | | | | |
|-------|-------|--------|--------|
| (1) 8 | (2) 7 | (3) 16 | (4) 10 |
|-------|-------|--------|--------|

07. The number of Adharanecya vega is :

- | | | | |
|--------|--------|-------|-------|
| (1) 13 | (2) 10 | (3) 8 | (4) 6 |
|--------|--------|-------|-------|

08. The synonym of Nidana is :

- | | |
|---------------|--------------|
| (1) Samsthana | (2) Vyanjana |
| (3) Utthana | (4) Jati |

09. The shape of Dristi in Netra is that of :

- | | |
|--------------|----------------|
| (1) Rajika | (2) Masuradala |
| (3) Sarshapa | (4) Masha |

10. According to Sushruta the number of varieties of Mudha garbha gati is :

- | | | | |
|-------|-------|-------|-------|
| (1) 4 | (2) 6 | (3) 8 | (4) 2 |
|-------|-------|-------|-------|

11. Normal glomerular filtration rate is about :

- | | |
|-----------------|---------------|
| (1) 125ml/min | (2) 500ml/min |
| (3) 1250 ml/min | (4) 50ml/min |

12. तन्वङ्गा बलवन्तः स्निग्धवर्णस्वराः स्थूलदीर्घवृत्तसन्धयश्च.....।

ते दीर्घायुषो बलवन्तः श्रुतवित्तविज्ञानापत्यसंमानभाजश्च भवन्ति।। are the features of :

- | | |
|----------------------------|-----------------------------|
| (1) Kapha Vriddhi | (2) Majja Saara Individuals |
| (3) Meda Saara Individuals | (4) Mansa Saara Individuals |

13. दुःखबहुलताऽटनशीलताऽधृतिरहङ्कार आनृतिकत्वमकारुण्यं दम्भो मानो हर्षः कामः क्रोधश्च। Which of the following have these features ?

- | | |
|-------------------------|----------------------|
| (1) Rakta Saara Purusha | (2) Rajasika Purusha |
| (3) Majja Saara Purusha | (4) Tamsika Purusha |

- 14.** Which of the following parts of the eye has the greatest concentration of rods ?
- | | |
|------------------|-----------|
| (1) Ciliary body | (2) Iris |
| (3) Optic disk | (4) Fovea |
- 15.** Ageusia is the :
- (1) Absence of the sense of taste
 - (2) Unpleasant perception of taste
 - (3) Diminished taste sensitivity
 - (4) Disorder of smell
- 16.** Which one of the following statement is not true regarding Wilson's disease ?
- (1) Has an onset between 6 to 25 years of age,
 - (2) Is a genetic autosomal recessive disorder
 - (3) Affecting about four times as many females as males
 - (4) Disorder of Iron metabolism
- 17.** A lesion of Wernicke's area in the categorical hemisphere causes patients to :
- (1) Lose short-term memory
 - (2) Speak in a slow, halting voice
 - (3) Talk rapidly but make little sense
 - (4) Lose the ability to recognize faces

18. Which of the following hormones has the shortest plasma half life ?

- | | |
|--------------------|----------------------------|
| (1) Corticosterone | (2) Dehydroepiandrosterone |
| (3) Aldosterone | (4) Norepinephrine |

19. Which of the following has the highest pH ?

- | | |
|----------------------|------------------|
| (1) Gastric juice | (2) Hepatic bile |
| (3) Pancreatic juice | (4) Saliva |

20. स्वल्पाचारमपि यो न सहते is described for which one of the following :

- | | |
|---------------------------|--------------------------|
| (1) Kapha Prakriti Purush | (2) Mandagni Purush |
| (3) Vishamagni Purush | (4) Vata Prakriti Purush |

21. In the context of scholarly publishing domain in biomedical sciences

ICMJE stands for :

- | |
|---|
| (1) Institute of Community Medicine and Journal Editors |
| (2) International Committee of Medical Journal Editors |
| (3) Indian Committee of Monitoring Journal Ethics |
| (4) International Committee of Medicine and Journalism Ethics |

22. The ratio of pulmonary ventilation to pulmonary blood flow for the whole lung at rest is about :

- (1) 0.8 (2) 1 (3) 0.5 (4) 2

23. Surfactant lining the alveoli :

- (1) Helps to prevent alveolar collapse
- (2) Is produced in alveolar type-I cells and secreted into the alveolus
- (3) Is increased in the lungs of heavy smokers
- (4) Is a glycolipid complex

24. The ratio of the GFR to the RPF is known as :

- (1) Filtration Fraction (2) Tubular Function
- (3) PAH Clearance (4) Renal Blood Flow

25. Increasing alveolar ventilation increases the blood pH because :

- (1) It activates neural mechanisms that remove acid from the blood.
- (2) It makes hemoglobin a stronger acid
- (3) It increases the PO₂ of the blood
- (4) It decreases the PCO₂ in the alveoli

26. The following is not true with reference to क्लोम

- (1) It is located on the right side of the heart
- (2) Commentator तोडर has stated that फुफ्फुस is the same as क्लोम
- (3) क्लोमनाडी contains उलूखल type of सन्धि
- (4) It is related with उदकवह स्रोतस्

27. The term genomics was coined by :

- (1) Darwin
- (2) Thomas Roderick
- (3) H Winkler
- (4) Landsteiner

28. Which one of the following test is not used for the assessment of bleeding time :

- (1) Duke
- (2) Ivy
- (3) Tourniquet
- (4) Rees-Ecker method

29. The description of *Jatiprasakta*, *Kulaprasakta*, *Deshanupatini*, *Vayonupatini* and *Pratyatmaniyata Prakriti* is available in :

- (1) Charaka Indriya Sthana
- (2) Sushruta Sharir Sthana
- (3) Charaka Sharir Sthana
- (4) Charaka Sutra Sthana

30. The correct meaning of the following verse is :

प्राणोदानयोर्यद्यपि समानमुरःस्थानं तथाऽपि कर्मभेदान्नेद एव यथैकगृहस्थितमालाकारकुम्भकारयोः

- (1) Samana Vayu resides in the chest region. Though *Prana Vayu* and *Udana Vayu* perform similar functions, their locations are different. This can be compared with a situation where a gardener and a potter residing in different houses, perform similar kinds of functions, namely, selling the pots and selling the flowers.
- (2) *Prana Vayu* and *Udana Vayu* reside in the thoracic region, which is also the site of *Samana Vayu*. Yet, all the three perform different functions. This is similar to the situation, where, three people residing in the same house : a gardener, a potter and a blacksmith - perform different functions.
- (3) Though the thorax is the common location of *Prana Vayu* and *Udana Vayu*, the functions of these two types of *Vayu* are different. This can be compared with a situation where a gardener and a potter reside in the same house, yet perform different kind of duties.
- (4) All the above options are wrong. There is not mentioning of potter and blacksmith in the original verse.

31. Read the passage and choose the correct option to answer the question that follows it : "In 1921, Otto Loewi dissected two beating frog hearts. Both hearts were bathed in Ringer's solution. By electrically stimulating the vagus nerve, Loewi made the first heart beat slower. Then, Loewi took some of the liquid bathing the first heart and applied it to the second heart. The application of the liquid made the second heart also beat slower, proving that some soluble chemical was controlling the heart rate."

Question : What did Otto Lowei call the unknown substance ? Which chemical did actually correspond to this substance ?

- (1) Accelerenstoff and Acetylcholine respectively
 - (2) Vagusstoff and Acetylcholine respectively
 - (3) Histostoff and Acetylcholine respectively
 - (4) Accelerenstoff and norepinephrine respectively
32. Of the following statements related to रस (Rasa), identify the one that is FALSE :
- (1) The term रस (Rasa) stands for all the fluids that flow in the body, including रुधिर(Rudhira)
 - (2) व्यान वायु (Vyana Vayu) makes the movement of रस (Rasa) from the heart possible, whereas, समान वायु (Samana Vayu) takes रस (Rasa) towards हृदय (Hridaya)
 - (3) If रस (Rasa) remains improperly transformed because of weak अग्नि (Agni), it becomes आम (Aama)
 - (4) रस (Rasa) moves in the body in the fashion that is similar to the movement of अश्व (horse), हिरण (deer) and व्याघ्र (tiger)

33. There are 4 physiological phases in the Valsalva maneuver : (I) onset of strain, (II) continued strain, (III) release, and (IV) recovery. Identify the correct statement in this context :
- (1) The normal response is a decrease in heart rate during phase-II in response to the increase in blood pressure, and the baroreflex response to the blood pressure fall in phase-IV is transient tachycardia
 - (2) The normal response is an increase in heart rate during phase-II in response to the fall in blood pressure, and the baroreflex response to the blood pressure overshoot in phase-IV is transient bradycardia
 - (3) Valsalva ratio is the ratio of heart rate during phase II divided by the heart rate during phase IV and is a measure of sympathetic function
 - (4) None of the above is correct
34. The following statement is NOT true with reference to प्लीहा (Pliha) - Spleen :
- (1) Enlargement of प्लीहा (Pliha) may be observed in रक्त वृद्धि (Rakta Vriddhi) and मेद क्षय (Meda kshaya)
 - (2) क्षीर षट्पल घृत (Kshira Shatpalaka Ghrita) is contra-indicated in the treatment of disorders of प्लीहा (Pliha)
 - (3) विद्रधि (Vidradhi) may manifest in प्लीहा (Pliha) and प्लीहा (Pliha) may be involved in उदर रोग (Udara Roga)
 - (4) It is related with रक्तवह स्रोतस् (Raktavaha Srotas)

35. Which one of the following statements is FALSE in relation to लसीका (Lasika) ?

- (1) लसीका (Lasika) is a physiological seat of कफ (kapha)
- (2) तिक्त रस (Tikta rasa) helps in suppressing/absorbing/drying लसीका (Lasika)
- (3) लसीका (Lasika) may be involved in प्रमेह (Prameha), वीसर्प (Visarpa) and कुष्ठ (Kushtha)
- (4) In the entire Sushruta Samhita, the word लसीका has not been documented

36. Identify the incorrect sentence with reference to पित्त प्रकृति (Pitta Prakriti) individuals :

- (1) They have body odour because of तीक्ष्ण गुण (Tikshna Guna) of पित्त (Pitta)
- (2) They are able to digest large quantities of food easily, because of तीक्ष्ण गुण (Tikshna Guna) of पित्त (Pitta)
- (3) They perspire more because of द्रव गुण (Drava Guna) of पित्त (Pitta)
- (4) They experience premature graying, wrinkling of skin & early baldness because of उष्ण गुण (Ushna Guna) of पित्त (Pitta)

37. "Pitta is the *Mala of Rakta*" according to Ayurveda. The nearest possible correlation of this principle in terms of modern physiology is :

- (1) Amino acids are formed after the globin metabolism
- (2) Thyroid hormones stimulate erythropoiesis
- (3) Bilirubin is the metabolic byproduct of Hemoglobin
- (4) During heme metabolism, Heme is oxidized by heme oxygenase and this reaction produces carbon monoxide.

38. Which one of the following does not constitute the violation of publication ethics ?

- (1) Copying words or ideas from some other source without giving credit to the original author
- (2) Simultaneously submitting the same manuscript to two different journals
- (3) Publishing the same data in different forms in different papers
- (4) Using an open source image in your publication without giving proper attribution

39. The correct meaning of the followings statement is :

रसतीति रसो द्रवधातुरुच्यते, तेन रूधिरादीनामपि द्रवाणां ग्रहणं भवति

- (1) The one that tastes good is called *Rasa*. This term is inclusive of all fluids such as blood that taste good.
- (2) The one that causes liquefaction of all tissues is called *Rasa*. This causes the blood to become a fluid.
- (3) The blood and *Rasa* are actually different. Just because both these tissues are liquids, they cannot become identical.
- (4) The tissue that flows in the liquid form is called *Rasa*. This term includes all other fluids like blood also.

40. With reference to Pakvashaya, which one of the following statements is TRUE ?

- (1) It is the site where Ojas is formed
- (2) It is the location of the 5th Kalaa
- (3) It is the site where *Katu Vipaka* takes place
- (4) It is the site of administration of *Uttarabasti*

Short Answer Questions**लघु उत्तरीय प्रश्न**

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.

किन्हीं पाँच प्रश्नों के उत्तर दीजिए। प्रत्येक का उत्तर **150-200** शब्दों में दीजिए। प्रत्येक प्रश्न **16** अंकों का है। प्रत्येक प्रश्न का उत्तर अलग पृष्ठ पर प्रश्न संख्या लिखकर शुरू करें।

- 01.** Describe the physiology of formation of urine as per Sushruta Samhita.
- 02.** Describe the stages of *Kriya-kala* and the significance of each.
- 03.** Discuss the role of *Ojas* in physiology. How is *Ojas* related with *Kapha* and *Rasa* ?
- 04.** Explain role of *Triguna* in origin of Life & Universe.
- 05.** Explain the function and classification of *Alochaka Pitta*.
- 06.** Describe the recent advances in the domain of *Prakriti* and genomics.
- 07.** Discuss the physiology of circulation according to Ayurveda.

- 08.** Write their physio-clinical importance of Glycated Hemoglobin (HbA1c).
- 09.** Describe the physiological importance of Agni. Describe the classification and functions of Agni. Do you think these functions can be correlated with contemporary biochemistry ? If yes, how ? If no, why ?
- 10.** Write your opinion about the potential areas of research in the field of Kriya Sharir.

Question No.

प्रश्न संख्या

Page for Short Answer

लघु उत्तरीय के लिए पृष्ठ

Question No.

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Page for Short Answer

लघु उत्तरीय के लिए पृष्ठ

ROUGH WORK

रफ़ कार्य

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 30 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।