

Question Booklet No.

(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 changes 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 page 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 : 15

FOR ROUGH WORK

Research Entrance Test – 2013

No. of Questions : 50

Time : 2 Hours

Full Marks : 200

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

(ii) 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.

(iii) 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.

1. Which one is used to measure length ?
(1) Payya Mana (2) Pautava Mana (3) Druvaya Mana (4) Nishpava
2. Melting temperature of silver is ?
(1) 232°C (2) 419°C (3) 960°C (4) 1063°C
3. Bulb of onion is modification of ?
(1) Root (2) Stem (3) Radical (4) Plumula
4. Movement of food through oesophagus is due to ?
(1) Lubrication of saliva (2) Peristalsis
(3) Gravitational pull (4) External pressure
5. The breakdown of pyruvate to give carbon dioxide, water and energy takes place in ?
(1) Cytoplasm (2) Mitochondria (3) Chloroplast (4) Nucleus
6. The autotrophic mode of nutrition requires ?
(1) Carbon dioxide and water (2) Chlorophyll
(3) Sunlight (4) All of above three
7. Where is bile produced ?
(1) Gall bladder (2) Blood (3) Liver (4) Spleen
8. The correct pathway of blood in circulatory system is ?
(1) Atria → ventricles → arteries → veins
(2) Ventricles → atria → veins → arteries
(3) Ventricles → veins → arteries → atria
(4) Veins → ventricles → atria → arteries
9. How does light normally travel ?
(1) In concentric circles (2) In a straight line
(3) Always towards a dark area (4) In a curved line
10. Light travels fastest through which of the following material ?
(1) Diamond (2) Water (3) Glass (4) Air

11. Fast muscle fibers have :
- (1) More extensive blood vessel system and capillaries to supply extra amount of oxygen
 - (2) Extensive sarcoplasmic reticulum for rapid release of calcium ions to initiate contraction
 - (3) Small fibers
 - (4) Greatly increased number of mitochondria
12. Special type of CNS ischemic response that results from the increased pressure of the cerebro spinal fluid around the brain in the cranial vault :
- (1) Cushing Reaction
 - (2) Cushing's Syndrome
 - (3) Vasovagal attack
 - (4) Atrial Flutter
13. The normal dead space air in young adult man is about :
- (1) 150 ml
 - (2) 250 ml
 - (3) 500 ml
 - (4) 50 ml
14. In adipose tissue, activity of hormone sensitive lipase is increased by all the followings except :
- (1) Duke
 - (2) Ivy
 - (3) Tourniquet
 - (4) Rees-Ecker method
15. तन्वङ्गा बलवन्तः स्निग्धवर्णस्वराः स्थूलदीर्घवृत्तसन्धयश्च ।
ते दीर्घायुषो बलवन्तः श्रुतवित्तविज्ञानापत्यसमानभाजश्च भवन्ति ॥ are the features of :
- (1) Kapha Vriddhi
 - (2) Mazza Saar Individuals
 - (3) Meda Saar Individuals
 - (4) Mansa Saar Individuals
16. 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
17. The donor plasma is tested against the red cells of the recipient for the :
- (1) Major cross match
 - (2) Minor cross match
 - (3) Bleeding Time
 - (4) Clotting Time
18. दुःखबहुलताऽटनशीलताऽधृतिरहङ्कार आनृतिकत्वमकारुण्यं दम्भो मानो हर्षः कामः क्रोधश्च ।
Which one of the following have these features?
- (1) Rakta Saar Purush
 - (2) Rajasika Purush
 - (3) Mazza Saar Purush
 - (4) Tamsika Purush

19. अम्लशिशिरप्रीति, सिराशैथिल्यरूक्षता: are the features of :
- (1) Rasa Kshaya (2) Shukra Kshaya
(3) Rakta Kshaya (4) Pitta Kshaya
20. स्वपनं कटयाः प्लीहो वृद्धिः कृशांगता are the features of :
- (1) Meda Kshaya (2) Mazza Kshaya
(3) Shukra Kshaya (4) Asthi Kshaya
21. स्तब्धगुरुगात्रता वातशोफो वर्ण भेदो ग्लानिस्तन्द्रा निद्रा च व्यापन्ने are the features of :
- (1) Vata Vriddhi (2) Ojo Vyapada
(3) Ojo Visransa (4) Puresha Vriddhi
22. Which one of the following is *not* the feature of Srotodushti ?
- (1) Sanga (2) Siragranthi
(3) Vimargagamana (4) Dhamanishaithilya
23. The 'blood vessel diameter dependent' reduction in the viscosity of blood is called :
- (1) Fåhraeus-Lindqvist effect (2) Windkessel Effect
(3) Bohr Effect (4) Countercurrent mechanism
24. Hemorheology is the study of :
- (1) Color properties of blood cells
(2) Clotting properties of blood
(3) Flow properties of blood and its elements
(4) Immunity
25. How do you transliterate the term क्रियाशरीर according to the International Alphabet of Sanskrit Transliteration ?
- (1) Kriyā Sārīra (2) Kriyaa Shaareera
(3) Kriya Sharira (4) Kriy āśārīra
26. The correct version of the missing portion of the following text is : व्यानेन रसघातुर्हि विकेपोचितकर्मणा
- (1) युगपत् सर्वतोऽजस्रं देहे विक्षिप्यते सदा (2) युगपत् सर्वतोऽजस्रं देहे विक्षपते सदा
(3) युगपत् सर्वतोऽजस्रं काये विक्षिप्यते सदा (4) युगपत् सर्वतोऽजस्रं देहे विक्षिप्यते सदा

27. Following is *not* true about human insulin :
- (1) It increases glucose uptake by the cells
 - (2) It is composed of two polypeptide chains: chain A has 21 amino acids and chain B has 30 amino acids.
 - (3) It reduces potassium uptake by the cells
 - (4) It increases amino acid uptake by the cells
28. Prominent U waves in ECG may be seen in the following conditions :
- (1) First degree AV Block, Sick Sinus Syndrome
 - (2) Hypokalemia, Hypercalcemia, Thyrotoxicosis
 - (3) Hyperkalemia, Hypocalcemia, Hypothyroidism
 - (4) Second degree AV Block, Ectopic beats
29. You are studying the heart rate variability after exercise in people belonging to different Prakriti. Which statistical test is best suited to compare means to see if the heart rate varies according to Prakriti or not ?
- (1) Independent samples T Test
 - (2) One way ANOVA
 - (3) Repeated measure ANOVA
 - (4) Multivariate analysis of variance (MANOVA)
30. "Samāna Vāyu brings Rasa towards Hridaya" is the explanation found in :
- | | |
|-------------------------|---------------------|
| (1) Caraka Samhitā | (2) Bhāvaprakāśa |
| (3) Śārṅgadhara Samhitā | (4) Suśruta Samhitā |
31. The following statement is the contribution of which commentator ?
"The term 'Rasa' stands for all the fluids that flow in the body and includes even the fluids such as Rudhira"
- | | | | |
|--------------------|------------|-------------|----------|
| (1) Cakrapānidatta | (2) Dalhna | (3) Jejjāta | (4) Indu |
|--------------------|------------|-------------|----------|
32. The DNA was isolated for the first time by :
- (1) Friedrich Miescher in 1869
 - (2) Francis Crick, James D. Watson and Maurice Wilkins in 1953
 - (3) Rosalind Franklin in 1953
 - (4) Erwin Chargaff in 1952

40. Administration of diuretics causes loss of potassium, which may lead to :

- | | |
|---------------------------|--------------------------|
| (1) Metabolic acidosis | (2) Respiratory acidosis |
| (3) Respiratory Alkalosis | (4) Metabolic Alkalosis |

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. Write in brief the recent advances in understanding related to Prakriti.
2. Transliterate and Translate the following verse and explain the meaning in Hindi/English :
अन्नमादानकर्मा तु प्राणः कोष्ठं प्रकर्षति ।
तद्द्रवैर्भिन्नसङ्घातं स्नेहेन मृदुतां गतम् ॥६॥
समानेनावधूतोऽग्निरुदर्यः पवनोदवहः ।
काले भुक्तं समं सम्यक् पचत्यायुर्विवृद्धये ॥७॥
एवं रसमलायान्नमाशयस्थमधः स्थितः ।
पचत्यग्निर्यथा स्थात्यामोदनायाम्बुतण्डुलम् ॥८॥
3. Explain the physiology of Renin-Angiotensin System.
4. Explain the muscle spindle and the mechanism of regulation of tone in skeletal muscles.
5. Describe the physiology of urine formation as explained in Ayurveda. Write your interpretation of this textual explanation.
6. Describe the significance of correlation coefficient by giving few examples.
7. Describe different phases of clinical trial.
8. Differentiate between longitudinal and cross sectional studies.
9. Describe the respiratory physiology as per Ayurveda. Write your interpretation.
10. Discuss the seasonal variation and physiological changes.

Roll No. :

Q. No. :

Roll No. :

Q. No. :

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Q. No. :

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FOR ROUGH WORK

