APPSC GROUP-1 MAINS MOCK TEST-1

2020

SCIENCE AND TECHNOLOGY

PAPER V

Time : 3 hours   *Maximum Marks : 150*

Instructions :

(i) The candidate has to write answers to 15 questions. There will be choice for choosing each question. Each question carries 10 marks.

(ii) Each Answer Book contains 48 pages (including cover pages) and the candidate should complete their answers with in the paper provided. No additional paper will be given.

(iii) The candidate has to write his answers in the medium chosen by him only. If there is any deviation from paper to paper or part of the paper, the candidature would become invalid.

(iv) Writing of Symbols or any type of Identification of marks etc., anywhere on the Answer Scripts and using other than Blue / Black i.e., using of Coloured Sketch Pens will lead to invalidation of the Answer Sheets. Also only one ink i.e. either Blue or Black (Ball Pen) to be used. Otherwise, the paper will be treated as invalid.

(v) Though the paper in English is taken as standard for valuation under normal circumstances, if necessary, a balanced view would be taken after comparing English and Telugu versions.

1. (a) Explain how digital health technology addressed the most urgent needs such as contact tracing, testing, and surveillance during the Covid-19 pandemic?

OR

(b) Entrepreneurs and innovators across India have responded quickly to the challenge posed by the COVID-19 pandemic and brought several new technologcal innovations to fight against Covid-19. Discuss.

2. (a) What is ICT? How education sector can use ICT to support, enhance, and optimise the delivery of information?

OR

(b) What is Artificial Intelligence(AI)? How does an AI system differ from information technology? How AI is changing information technology?

3. (a) Indian Government has created a new organistaion Indian National Space Promotion and Authorisation Centre (IN-SPACe) to ensure greater private participation in India's space activities. In this backdrop, describe the role of private sector in improving the India's industrial base and access to space-based service?

OR

(b) Discuss the DRDO's contribution in the development of key defence equipments and military platforms for all the three services?

4. (a) Renewable energy sources and technologies have potential to provide solutions to the longstanding energy problems being faced by the developing countries like India. Evaluate government policies in this regard.

OR

(b) What is nuclear power? Write a short note on commonly used nuclear reactor types in India?

5. (a) Analyse the various causes of urban floods in India? Suggest measures to address urban flooding in India?

OR

(b) Give an account of the distribution of minerals in Andhra Pradesh?

6. (a) Explain the salient features of the online waste exchange website of Andhra Pradesh Environment Management Corporation (APEMC) which was launched on the occasion of World Environment Day 2020 by AP government?

OR

(b) Expain the nature of Green and Sustainable Pharmacy?

7. (a) What is Bio-Technology? Explain its significance in different fields?

OR

(b) Do you agree that the benefits of biodiversity far exceed the costs of current levels of biodiversity protection? Explain the impacts of biodiversity on economic activities of a country.

8. (a) What are vaccines? Write the fundamental concept of vaccination and list some of the compulsory vaccines for children.

OR

(b) What is Corona Virus? What are the symptoms of COVID-19 and how it spread to humans? What is the incubation period for COVID-19 and how to treat it?

9. (a) Examine the challenges faced by India in the protection and enforcement of patent rights in India?

OR

(b) Briefly explain some landmark judgements on IPR Law in India?

10. (a) What does Chandrayaan-2 hope to accomplish? Why India is exploring the Moon's South Pole?

OR

(b) What is Environmental Impact Assessment? Do you think that the draft . Environmental Impact Assessment (EIA) 2020 has severely diluted environmental protection principles? Evaluate.

11. (a) What are BS-VI norms and how these norms are different from BS4 norms? Explain BS-VI norms impact on Indian Auto & Auto Component Industry?

OR

(b) What are the salient features of FAME scheme? How it aims to promote the use of electric vehicles in India?

12. (a) What are antibodies and antibody tests? Differentiate between the PCR Molecular, antigen, and antibody tests involved in detecting Coronavirus?

OR

(b) List out the similarities and differences between COVID-19 and SARS?

13. (a) Discuss the relationship between climate change and energy security in the context of India and explain the key issues involved and suggest solutions.

OR

(b) Cyberthreats are constantly evolving in order to take advantage of online behaviour and trends. The COVID-19 outbreak is no exception. Discuss.

14. (a) Critically evaluate the relationship between agriculture and science?

OR

(b Explain the main causes and effects of soil erosion in India? Also write briefly on soil erosion techniques?

15. (a) What is in the Paris climate agreement 2015? How India set the path to meet Paris Agreement targets?

OR

(b) What are the most essential components of disaster preparedness? Explain with the help of suitable examples.