

## ENTRANCE EXAMINATION, 2013

M.Phil./Ph.D.

## STUDIES IN SCIENCE POLICY

[ Field of Study Code : SSPP (148) ]

Time Allowed : 3 hours

Maximum Marks : 70

- Note :** (i) This question paper has **four** Parts. Read the instructions given in each Part.  
(ii) All Parts are to be answered in the answer-script.  
(iii) The figures in the right-hand margin indicate marks for the questions.

## PART—I

Choose the correct answer/Answer the following :

1×10=10

1. The book entitled, *Small is Beautiful* was authored by

- (a) Joseph Schumpeter
- (b) E. F. Schumacher
- (c) Joseph Needham
- (d) Max Weber

2. Which of the following is correctly matched?

- (a) Scientific Policy Resolution —1955
- (b) Technology Policy Statement —1983
- (c) Science and Technology Policy —2005
- (d) None of the above

3. The Frascati Manual refers to

- (a) technology transfer
- (b) environmental standards
- (c) agricultural productivity
- (d) measurement of R&D activities

4. The Decade of 2010–2020 has been declared by the Government of India as the Decade of
- (a) Innovation
  - (b) Energy
  - (c) Science
  - (d) All of the above
5. Bioequivalence refers to
- (a) standard on biofertilizers
  - (b) standard on generic pharmaceuticals
  - (c) standard on food and beverages
  - (d) standard on bottled drinking water
6. Which of the following is correctly matched?
- (a) *Wings of Fire*—A. P. J. Abdul Kalam
  - (b) *I too had a Dream*—Vergheese Kurian
  - (c) *Alternative Sciences*—Ashis Nandy
  - (d) All of the above
7. Which of the following is correct about the Human Genome Project?
- (a) It was started in 1980
  - (b) It was an effort of the USA alone
  - (c) It was completed in 2003
  - (d) It was initiated by India
8. 'National Science Day' is celebrated to honour which of the following scientists?
- (a) Ramanujam
  - (b) J. C. Bose
  - (c) Chandrasekhara Venkata Raman
  - (d) Chandrasekhar Subrahmanyam
9. India's 'Chandrayan-2' is scheduled to be launched in
- (a) November, 2013
  - (b) January, 2014
  - (c) December, 2013
  - (d) None of the above
10. Expand the following abbreviations :
- (a) DBT
  - (b) ICAR
  - (c) DAE
  - (d) ICMR

PART—II

Explain any *five* of the following in 50 words each :

2×5=10

11. Cluster sampling
12. Regression
13. R&D indicators
14. Science Citation Index
15. Cloud computing
16. Alienation of labour
17. Blue gene
18. SPSS
19. Cybernetics
20. Inclusive innovation

PART—III

Answer any *four* of the following in not more than 200 words each :

5×4=20

21. Discuss the basic differences between production of knowledge and production of goods.
22. Analyze the risk governance mechanism in nanotechnology.
23. What is the significance of stem cell research for India?
24. What is technological determinism?
25. Discuss Gandhi's ideas on technology and its relevance in contemporary India.
26. Explain the concept of increasing returns to scale in production of knowledge.
27. Discuss the process of institutionalization of science in India.

28. Will mobile phones replace computer-based Internet in India?
29. Should there be more CCTVs to prevent crimes in the society? Or, is privacy more important?
30. "Jugaad is a corrupt way of looking at innovation." Do you agree? Explain.
31. Is climate change anthropogenic? Explain.
32. Discuss the role of ICTs in bringing transparency in governance.
33. Discuss the role of leadership and organization in 'white revolution' in India.

#### PART—IV

Answer any *two* of the following in 1500 words each :

15×2=30

34. Discuss the importance of the Science, Technology, and Innovation Policy, 2013.
35. "Monopoly is a natural breeding ground for innovation." Do you agree? Explain.
36. Prepare a hypothetical research design to study the importance of nuclear energy programme in India.
37. Discuss the role of 'social network sites' in promoting participative democracy across the nations.
38. What is people's science movement? Analyze the role of leadership and institutions involved in this movement in India.
39. Discuss the ideological underpinnings of India's science policy in post-Independence period (1950–2013).
40. Discuss the significance of harmonizing the international agreements at national level in the context of Convention on Biological Diversity and FAO Treaty on plant genetic resources for food and agriculture.
41. Analyze critically the role of technology foresight for a balanced socioeconomic development.
42. "Increasing number of international collaboration necessarily indicates India's emergence as a global power in setting the agenda for scientific research." Do you agree? Illustrate.

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