

IAS PRELIMS 2020

COMPLETE REVISION OF CURRENT AFFAIRS through 500 MCQs

DAY: 43

QUESTIONS
with ANSWER HINTS



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SEPTEMBER
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QUESTIONS

1. Consider the following statements about Pre-natal diagnosis tests:

- 1. Dual Marker and Triple Marker Tests look at the level of certain hormones which are 'markers' associated with Down's Syndrome.
- The use of Amniocentesis for sex determination is prohibited by law but its use for determination of disability in foetus is allowed.

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

2. Consider the following statements regarding NASA's Lunar Reconnaissance Orbiter (LRO) mission:

- 1. This Exploration Mission was focused on supporting the extension of human presence in the solar system.
- 2. It created the first cosmic ray albedo proton map of the Moon.

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Exercise

3. Consider the following pairs:

27(0) 4150			
1.	Dharma Guardian	India-Japan	
2.	Shinyuu Maitri	India-China	
3.	Cope India	India-USA	

Which of the pairs given above is/are correctly matched?

Countries

- (a) 1 only
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

4. The military exercise Maitree-2019 was held between which countries:

- (a) India and Vietnam
- (b) India and Maldives
- (c) India and Thailand
- (d) India and Australia

5. Consider the following statements regarding "vitamin B12":

- 1. It is fat soluble and helps in the metabolism of every cell in the human body.
- 2. This vitamin is only found in animal meat and to a lesser extent in milk products
- 3. India lacks a nation-wide data on B12 deficiency

Which of the above statements is/are correct?

- (a) 1 and 3 only
- (b) 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

6. Consider the following statements regarding "MOSAIC Mission":

- 1. The mission is launched by NASA.
- 2. Objective of the mission is to find rare earth minerals beneath Earth's surface.

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

7. Sagittarius A* recently seen in news is:

- (a) A black hole at the center of the Milky Way.
- (b) An exoplanet revolving around star Aplha Centauri.
- (c) A newly discovered asteroid in the Kupier belt.
- (d) None of the above.



8. Consider the following statements regarding UMMID initiative:

- 1. It is started by The Department of Biotechnology (DBT).
- 2. It aims to create awareness about genetic disorders amongst clinicians to establish molecular diagnostic in hospitals.

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

9. "INS Nilgiri" recently seen in news is

- (a) Stealth frigate
- (b) Nuclear powered submarine

- (c) Aircraft Carrier
- (d) Anti-piracy ship

10. Consider the following statements regarding Elephant Endotheliotropic Herpesvirus:

- 1. EEHV is as a type of herpes virus that can cause hemorrhagic disease in young Asian elephants.
- 2. The disease is usually fatal, with a short course of 28-35 hours.
- 3. There is no cure for herpes viruses in animals.

Which of the above statements are correct?

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3





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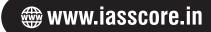


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ANSWER HINTS

Answer Key

- Q. 1 (c)
- Q. 3 (b)
- Q. 5 (b)

(b)

- Q. 7 (d)
- Q. 9 (d)

- Q. 2 (c)
- Q. 4 (b)
- Q. 6
- Q. 8 (a)
- Q. 10 (c)

1. Correct Option: (c)

Explanation:

Both statement are correct

Supplementary notes:

Various Prenatal Diagnosis Tests

- Dual Marker and Triple Marker Tests: These tests look at the level of certain hormones which are 'markers' associated with Down's Syndrome.
- **Ultrasound Tests:** They are used extensively, four-five times in the pregnancy. Here we look for markers for certain abnormalities. In the case of Down's Syndrome, for example, certain physical characteristics suggest that the foetus has this condition. With an ultrasound at 18-19 weeks we can pick up lots of information on structural problems.
- **Invasive Tests:** These test the amniotic fluid, chorionic villus tissue or foetal blood. Sometimes we even do a skin biopsy of the baby. The other tests will give you a probable diagnosis each one has its own proportion of false positives and false negatives. But when we test the tissue, we are actually looking at the genes, chromosomes, DNA, and this gives us a confirmatory result for certain genetic diseases. Amniocentesis is an example of invasive test.
- 2. Correct Option: (c)

Explanation:

Both statements are correct

Supplementary notes:

About LRO:

 Lunar Reconnaissance Orbiter (LRO) is a robotic mission that set out to map the moon's surface

- and, after a year of exploration, was extended with a unique set of science objectives.
- LRO entered lunar orbit on June 23, 2009 and after spacecraft commissioning, the Exploration Mission began on September 15, 2009.
- The Exploration Mission completed on September 15, 2010 when responsibility for LRO was transferred to NASA's Science Mission Directorate for a two-year Science Mission with a new set of science goals. The LRO mission has been extended to continue lunar science and exploration.

Focus of the exploration Mission:

- The Exploration Mission was focused on supporting the extension of human presence in the solar system.
- LRO continues to help identify sites close to potential resources with high scientific value, favourable terrain and the environment necessary for safe future robotic and human lunar missions.
- LRO observations have enabled numerous ground-breaking discoveries, creating a new picture of the moon as a dynamic and complex body. These developments have set up a scientific framework through which to challenge and improve our understanding of processes throughout the solar system.

Some of the LRO exploration and science results:

- In polar shadowed regions found the coldest spots measured (below 30 K) in the solar system.
- Discovered significant subsurface hydrogen deposits in regions cold enough for water ice to survive, as well as in additional hydrogen deposits in warmer areas where surface water ice is not thermally stable.



- New (<5 years old) impact craters and are found to be widespread across the lunar surface, with a surprising abundance of related surface changes.
- Developed an improved catalogue of lunar craters larger than 20 km in diameter, thus providing constraints on the ancient impactor population that affected the inner solar system.
- First radar measurements of the lunar far side.
- Characterized relatively young volcanic complexes, such as Ina, and revealed first direct evidence of the presence of highly silicic volcanic rocks on the Moon.
- Measured galactic cosmic ray interactions with the Moon during a period with the largest cosmic ray intensities observed during the space age.
- Created the first cosmic ray albedo proton map of the Moon.

3. Correct Option: (b)

Explanation:

 <u>Pair 2 is incorrectly matched:</u> It is the first bilateral exercise between Japan Air Self-Defence Force (JASDF) and the Indian Air Force.

Supplementary notes:

Bilateral Exercises

- "Dharma Guardian": It is the first bilateral exercise between the Japan Ground Self-Defense Force (JGSDF) and the Indian Army in the area of counter-terrorism.
- **'SHINYUU MAITRI 18':** It is the first bilateral exercise between Japan Air Self-Defence Force (JASDF) and the Indian Air Force.
- "Cope India": It is the India-U.S. bilateral exercise.

Other exercises:

S. No.	Name of exercise	Participat- ing country	Nature of exercise
1.	YUDH ABHYAS	India & United States	Army exercise
2.	KUVERIN	India & Maldives	Army exercise
3.	AUSINDEX	India & Aus- tralia	Naval exer- cise
4.	MITRA SHAKTHI	India & Sri Lanka	Army exercise

	5.	Malabar Naval Exercise	India & US & Japan	Naval Exer- cise
	6.	Sundarban Maitri	India and Bangladesh	Border Security Force (BSF) and Border Guard Bangladesh (BDB)
	7.	Suryakiran	India and Nepal	Army exer- cise
	8.	Ex Lamitya VII	Indo-Sey- chelles Joint Training	Army Exercise
	9.	SAADMEx	SAARC	Disaster Manage- ment Exercise by NDRF
	10.	Exercise Livewire	IAF's annual exercise	Indian Air Force
	11.	HAND-IN- HAND	India & China	Army exer- cise
	12.	SLINEX	India & Sri Lanka	Naval Exer- cise
	13.	Indra	India & Russia	Army exer- cise
	14.	SAMPRITI	India & Bangladesh	Army exer- cise

4. Correct Option: (c)

Explanation:

 Option (c) is correct: MAITREE-2019 was held between India and Thailand.

Supplementary notes:

MAITREE Exercise

- Exercise MAITREE is the annual bilateral joint exercise between Indian Army (IA) and Royal Thailand Army (RTA).
- The aim of exercise is joint training of troops in counter terrorism operations in both jungle terrain and urban scenario.
- Exercise MAITREE-2019 has been the face of long standing bilateral ties between India and Thailand since 2006.
- The 14 days exercise will be conducted under the framework of United Nations mandate. Both contingents will share their valuable experiences in the conduct of counter terrorism operations in form of lectures, drills, demonstrations and skill-at-arms with an aim to refine tactics, techniques and procedures.



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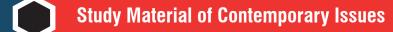












5. Correct Option: (c)

Explanation:

• **Statements 1 is incorrect:** Vitamin B12 is water soluble.

Supplementary notes:

Vitamin B12

- A water-soluble vitamin, B12 is the most critical element in the metabolism of every cell in the human body. Deficiency can cause anemia, weakness of limbs and dementia.
- Pregnant women who lack this vitamin can give birth to brain-damaged babies, which can lead to autism.
- India doesn't have nation-wide data on B12 deficiency. But there is wide acceptance among the medical fraternity that a large number of people as many as those suffering from vitamin D deficiency have this problem.
- About 47 per cent people in northern India are vitamin B12 deficient. Thus, being an endemic problem
- This vitamin is only found in animal meat and to a lesser extent in milk products.
- For India, this debate has greater relevance as about 30 per cent of the population is vegetarian, according to an assessment of the National Sample Survey Office in 2014.
 An Indian eats roughly 4 kg of meat per year, as compared to the global average of 43 kg, according to the Food and Agriculture Organization.
- But there is another layer to the curious case of B12 deficiency in India. Even the nonvegetarian population is facing this deficiency. Most non-vegetarian Indians largely consume chicken, which has very little amount of vitamin B12 as compared to mutton or sea food
- The government should also think about fortification as a possible panacea. The easiest solution is to inject the vitamin; a one course injection can suffice for a year.

6. Correct Option: (d)

Explanation:

- <u>Statement 1 is incorrect:</u> It is a polar expedition initiated by German research icebreaker Polarstern.
- Statement 2 is incorrect: It is a one-year-long expedition into the Central Arctic to study its climate.

Supplementary notes:

Mosaic Mission

- The Multidisciplinary drifting Observatory for the Study of Arctic Climate expedition is a one-year-long expedition into the Central Arctic, planned to take place from 2019 to 2020
- For the first time a modern research icebreaker will operate in the direct vicinity of the North Pole year round, including the nearly half year long polar night during winter.
- During its one-year-long journey, the central expedition ship, the research icebreaker Polarstern from Germany's Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research (AWI), will be supported and resupplied by the icebreakers Akademik Fedorov and Admiral Makarov (Russia), Oden (Sweden) and Xue Long II (China).
- The `results of MOSAiC mission will contribute to enhance understanding of the regional and global consequences of Arctic climate change.
- It will be helpful in understanding the reasons behind the sea-ice loss and improve weather and climate predictions.

7. Correct Option: (a)

Explanation:

 Option (a) is correct: Sagittarius A* is one of very few black holes in the universe where we can actually witness the flow of matter nearby.

Supplementary notes:

Sagittarius A

- Sagittarius A is a bright and very compact astronomical radio source at the center of the Milky Way, near the border of the constellations Sagittarius and Scorpius.
- It is likely the location of a supermassive black hole, similar to those generally accepted to be at the centers of most if not all spiral and elliptical galaxies.
- Astronomers have used NASA's Chandra X-ray Observatory to take a major step in understanding why material around Sgr A* is extraordinarily faint in X-rays.
- Sgr A* is one of very few black holes in the universe where we can actually witness the flow of matter nearby.

8. Correct Option: (c)

Explanation:

Both statements are correct

Supplementary notes:



UMMID

- The Department of Biotechnology (DBT) has started the UMMID (Unique Methods of Management and treatment of Inherited Disorders) Initiative which is designed on the concept of 'Prevention is better than Cure'.
- **UMMID aims** to create awareness about genetic disorders amongst clinicians to establish molecular diagnostic in hospitals.

Goals of UMMID initiative:

- To establish NIDAN (National Inherited Diseases Administration) Kendras to provide counselling, prenatal testing and diagnosis, management, and multidisciplinary care in Government Hospitals wherein the influx of patients is more.
- To produce skilled clinicians in Human Genetics.
- To undertake screening of pregnant women and new born babies for inherited genetic diseases in hospitals at aspirational districts.

Why need UMMID?

- The contribution of genetic disorders to infant and childhood mortality and morbidity is increasing.
- InIndia's urbanareas, congenital malformations and genetic disorders are the third most common cause of mortality in new-borns. With a very large population and high birth rate, and consanguineous marriage favoured in many communities, prevalence of genetic disorders is high in India.
- The congenital and hereditary genetic diseases are becoming a significant health burden in India, and there was the need for adequate and effective genetic testing and counselling services
- Though there are excellent medical genetics centres in India providing state-of-the-art patient care services to families with genetic disorders, the number of such centres is small
- Hence establishment of patient care services for genetic disorders is the need of the time.
- Therefore the Department of Biotechnology has initiated the UMMID program to establish many genetic diagnostic centres in different parts of the country.
- To achieve this, a combined program of training doctors in genetic diagnostics and providing funding to establish genetic diagnostic laboratories and to create awareness about genetic disorders amongst doctors and lay persons, has been meticulously planned.

9. Correct Option: (a)

Explanation:

Option (a) is correct

Supplementary notes:

INS Nilgiri

- INS Nilgiri is the first ship of Project 17A frigates
- Project 17A frigates are a design derivative of the Shivalik class stealth frigates with much more advanced stealth features and indigenous weapons and sensors.
- The P17A frigates incorporate new design conceptsforimprovedsurvivability,seakeeping, and stealth and ship manoeuvrability.

10. Correct Option: (d)

Explanation:

All statements are correct

Supplementary notes:

EEHV

- Elephant endotheliotropic herpesviruses
 (EEHV) or Elephantid betaherpesvirus 1
 (EIHV-1) is a type of herpesvirus, which
 can cause a highly fatal hemorrhagic
 disease when transmitted to young Asian
 elephants.
- The four deaths in Nandan Kanan Zoo are the first reported cases of EEHV-related deaths in an Indian zoo
- Most elephants carry just as most humans carry a cold virus. When EEHV is triggered, the elephant dies of massive internal bleeding and symptoms which are hardly visible.
- Some elephants show symptoms such as reduced appetite, nasal discharge and swollen glands
- There is no true cure for herpesviruses in animals or in humans, because herpes viruses go latent.
- EEHV is lethal for young elephants between the ages of one and 12. If a young elephant dies before reproducing, it affects the population of the species as a whole in the concerned geography.
- In India, the CZA will set up a national committee of scientists from Guwahati, Kerala, IVRI and Nandan Kanan to develop protocols for the country lest an EEHV outbreak occurs elsewhere in the future.



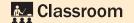


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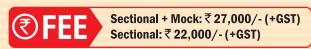
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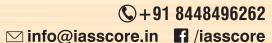




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