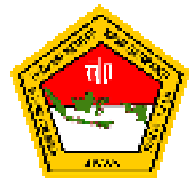


PEMERINTAH KABUPATEN TAPANULI TENGAH
SMA NEGERI 1 MATAULI PANDAN

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TES BIDANG AKADEMIK
PENERIMAAN PESERTA DIDIK BARU T.P. 2014/2015

Hari/Tanggal : Minggu, 30 Maret 2014
Mata Pelajaran : 1. IPA
2. Bahasa Inggris
Waktu : 11.00 – 13.00 WIB (120 Menit)
Sesi ke : 02

Mata Pelajaran : 1. IPA (Nomor 1 s.d. 30)
Pilihlah jawaban yang benar pada soal dibawah ini !

1. Perhatikan tabel di bawah ah!

No	Besaran	Satuan
(1)	Volume	m ³
(2)	Percepatan	ms ⁻¹
(3)	Kuat arus listrik	A
(4)	Energi	kg m ² s ⁻²
(5)	Jumlah zat	mol
(6)	Massa Jenis	Kg m ⁻³
(7)	Gaya	Kg m s ⁻²

Berdasarkan tabel di atas, kelompok besaran turunan beserta satuannya menurut Sistem Internasional (SI) yang benar ditunjukkan oleh nomor

- A. (1), (2), (3) dan (4)
- B. (1), (4), (6) dan (7)
- C. (2), (4), (6) dan (7)
- D. (3), (4), (5) dan (6)

2. 1 kg es yang bersuhu -5°C memiliki kalor jenis es 2100 J/kg°C , kalor lebur es 336000J/kg dan kalor jenis air 4200 J/kg°C. Maka banyaknya kalor yang dibutuhkan untuk mencairkan seluruh es tersebut adalah

- A. 12.500 J
- B. 21.000 J
- C. 346.500 J
- D. 436.000 J

3. Empat orang siswa melakukan pengukuran benda, hasil percobaan ditunjukkan dalam tabel berikut :

Siswa	Massa (g)	Volume (cm ³)
A	44,8	64
B	38,4	48
C	21,6	27
D	28	30

Keempat benda tersebut dicelupkan kedalam minyak yang massa jenisnya 0,8 g/cm³, maka posisi benda adalah....

- A. A = terapung, B = melayang, C = tenggelam dan D = tenggelam
- B. A = terapung, B = terapung, C = tenggelam dan D = tenggelam
- C. A = terapung, B = terapung, C = melayang dan D = tenggelam
- D. A = terapung, B = melayang, C = melayang dan D = tenggelam

4. Perhatikan tabel di bawah ah!

Benda	Massa (g)	Massa jenis zat cair (g/cm ³)	Kedalam (cm)
A	250	0,6	20
B	200	0,8	20
C	150	1,0	20
D	100	1,3	20

Jika keempat benda tersebut dicelupkan pada masing – masing zat cair, maka benda yang mendapatkan tekanan hidrostatis paling besar adalah....

- A. Benda A
- B. Benda B
- C. Benda C
- D. Benda D

5. Kereta api “ Bengawan” jurusan Solo – Bandung, berangkat dari kota Solo pukul 18.30 WIB hari Senin. Jika jarak kota Solo - Bandung 600 km dan kecepatan kereta api rata – rata 60 km/jam, maka kereta api tiba di kota Bandung pada....

- A. Hari Senin pukul 04.30 WIB
- B. Hari Senin pukul 05.30 WIB
- C. Hari Selasa pukul 04.30 WIB
- D. Hari Selasa pukul 05.30 WIB

6. Sebuah benda beratnya 2000 N akan dinaikan kedalam sebuah truk yang tingginya 80 cm untuk mempermudah usaha maka digunakan bidang miring yang panjangnya 2 m. Maka besar usaha yang diperlukan adalah....

- A. 1600 J
- B. 4000 J
- C. 3200 J
- D. 16000 J

7. Sebuah benda bergerak dengan kecepatan v , setelah bergerak selama 6 detik kecepatan menjadi 2 kali semula, maka energi kinetiknya menjadi....
- Tetap (tidak berubah)
 - 2 kali semula
 - 4 kali semula
 - 6 kali semula

8. Perhatikan tabel di bawah!

No	Massa benda (kg)	F1 kekanan (N)	F2 kekiri (N)
1	2	140	100
2	3	250	280
3	4	200	120
4	5	150	300

Dari tabel diatas percepatan benda yang paling kecil ditunjukkan oleh benda nomor....

- 4
 - 3
 - 2
 - 1
9. Seorang anak berteriak ke arah tebing dan mendengar bunyi pantulan pertama setelah 2 detik kemudian, jika cepat rambat bunyi diudara 340 m/s maka jarak anak terhadap tebing adalah....
- 680 m
 - 340 m
 - 170 m
 - 85 m

10. Sebuah lensa cembung yang jarak fokusnya 5 cm digunakan sebagai lup. Jika pengamat mengamati obyek dengan mata berakomodasi maksimum maka posisi obyek berada....
- 2,5 cm
 - 3,5 cm
 - 4,2 cm
 - 7,5 cm

11. Jika sebuah benda diletakkan 8 cm di depan cermin cekung, perbesaran yang dihasilkan 3 kali. Jika jarak benda diubah menjadi 12 cm di depan cermin maka jarak bayangan yang terbentuk adalah....
- 6 cm
 - 8 cm
 - 12 cm
 - 24 cm

12. Empat buah hambatan yang sama bernilai 4 Ohm, dua hambatan masing – masing disusun paralel kemudian disusun seri. Rangkaian tersebut dihubungkan dengan sumber tegangan 12 V, maka arus yang mengalir dalam rangkaian adalah....
- 48 A
 - 24 A
 - 12 A
 - 3 A

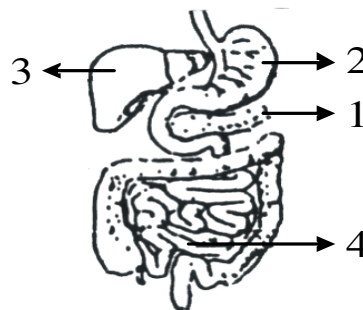
13. Sebuah elemen pemanas listrik dengan tegangan 220 V dan hambatan 110 Ohm. Digunakan untuk memanaskan 5 liter air selama 30 menit. Jika tarif listrik rata – rata Rp. 1000 / kWh, maka biaya yang diperlukan untuk memanaskan air tersebut adalah....
- Rp. 110
 - Rp. 220
 - Rp. 330
 - Rp. 440

14. Dua buah muatan listrik yang sejenis masing – masing berada pada jarak 3 cm sehingga menghasilkan gaya listrik sebesar F . Jika jarak keduanya diubah menjadi 9 cm maka gayanya menjadi....
- $(1/9) F$
 - $(1/6) F$
 - $(1/4) F$
 - $(1/3) F$

15. Sebuah tranformator memiliki efisiensi 80 % , bagian primer dihubungkan dengan tegangan 220 V dengan arus listrik 1 A, jika tegangan sekundernya 110 V maka kuat arus sekunder adalah....
- 2,0 A
 - 1,6 A
 - 1,0 A
 - 0,5 A

16. Tendon yang melekat pada bagian tulang yang bergerak disebut
- Ekstensor
 - Fleksor
 - Origo
 - Insersi

17. Perhatikan gambar berikut ini !



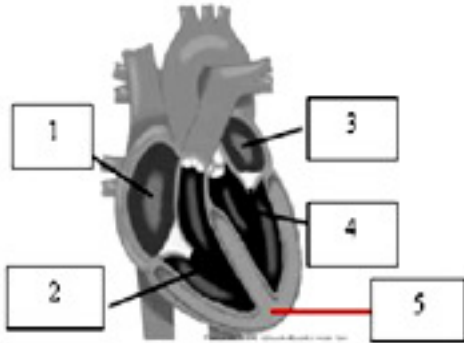
Hormon yang menstimulasi no 2 untuk mensekresikan getah yang berupa enzim HCL dan garam mineral adalah

- Gastrin
 - Sekretin
 - Insulin
 - Kolestokinin
18. Proses pengangkutan CO_2 ke paru-paru, diangkut dalam bentuk
- Oksihe moglobin
 - Karbondioksida
 - Karbominohe moglobin
 - Karboksi anhidrase

19. Pada respirasi internal terjadi proses
- pengikatan terhadap O_2 dan pelepasan CO_2 oleh hemoglobin
 - Pengambilan oksigen dari udara
 - Pelepasan karbon dioksida
 - pengikatan terhadap CO_2 dan pelepasan O_2 oleh hemoglobin

20. Perhatikan gambar di bawah ini, Miocardium ditunjuk pada no

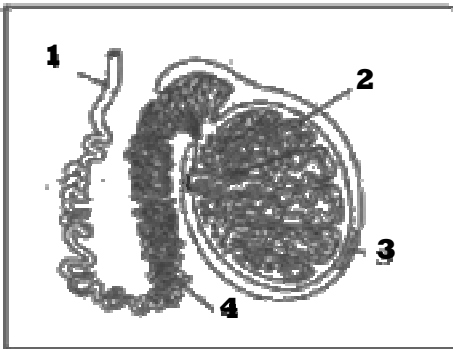
- 1
- 3
- 4
- 5



21. Apabila sampel darah diberikan zat anti A tidak menggumpal, maka kemungkinan di dalam eritrosit dan plasma darahnya terdapat

- Aglutinin A dan aglutinogen a
- Aglutinin a dan aglutinogen A
- Aglutinogen A dan aglutinin b
- Aglutinogen B dan aglutinin a

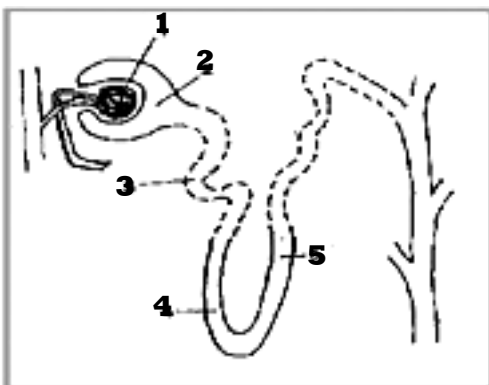
22. Perhatikan gambar alat reproduksi di bawah ini!



Tempat pembentukan sperma dan bagian yang diikat saat mengikuti program vasektomi Ditunjukkan secara berurutan oleh nomor....

- 1 dan 2
- 2 dan 3
- 2 dan 4
- 3 dan 4

23. Berdasarkan diagram nefron di bawah, terjadinya reabsorpsi glukosa dan asam amino pada bagian yang berlabel

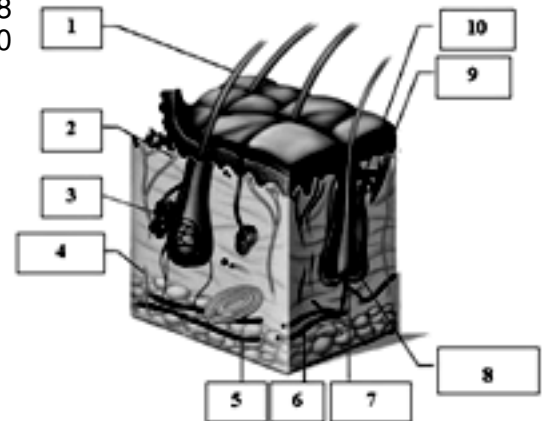


- 1
- 2
- 3
- 4

24. Diabetes insipidus disebabkan oleh
- kekurangan hormon antidiuretik
 - radang pada ginjal
 - gangguan pada filtrasi glomerulus
 - kelebihan hormon adrenalin

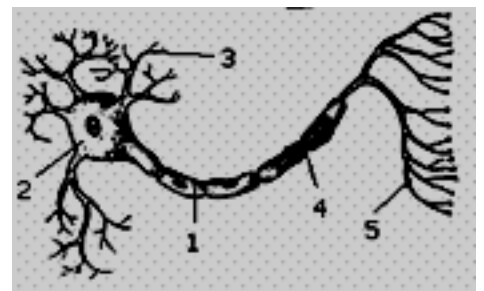
25. perhatikan gambar di bawah ini, batang rambut, kelenjar keringat, dan folikel ditunjukkan oleh no

- 1, 3, 8
- 8,9,10
- 1,2,3
- 2,3,4



26. Perhatikan gambar di bawah ini! Bagian yang berperan sebagai penerima stimulus adalah nomor

- 1
- 2
- 3
- 4



27. Berikut ini adalah ciri-ciri jaringan pada tumbuhan:

- selnya berbentuk serat
- terdapat penebalan dinding sel di bagian sudut
- dinding sel tersusun dari selulosa dan hemiselulosa
- terjadi fotosintesis

Ciri-ciri di atas merupakan karakteristik dari jaringan

- sklerenkim
- parenkim
- epidermis
- kolenkim

28. Pecahnya sel annulus pada sporangium paku termasuk gerak

- tropisme
- nasti
- higroskopis
- taksis

29. Perilaku tikus gurun bersembunyi pada siang hari saat terik matahari disebut
- Autotomi
 - Hibernasi
 - Mimikri
 - Estivasi
30. Pada *Drosophilla* sp. Mata merah dominan terhadap putih. Gen yang bertanggung jawab terhadap warna mata terpaut kromosom seks X. Jika disilangkan lalat betina mata merah dengan jantan mata putih, lalu antarketurunannya disilangkan dengan sesamanya, maka akan dihasilkan keturunan
- 50% mata merah ; 25% mata putih ; 25% mata merah
 - 50% mata merah ; 50% mata putih
 - 75% mata merah ; 25% mata putih
 - 25% mata merah ; 25% mata putih ; 25% mata merah ; 25% mata putih

33. What is the best moral for the story?
- People who plan ahead are often selfish.
 - If you are in trouble, no one will help you.
 - A short happy life is better than a long boring one.
 - Always prepare for difficult time in the future.
34. ... then you must starve in winter." (the last sentence of paragraph 2).
The underlined word refers to
- The grasshopper
 - The ant
 - the winter
 - the summer

The following text is for question 35 to 39.

PANDA

There are two kinds of Panda that live in Asia. They are Giant Panda and Red Panda. Giant Pandas live in China. Red Pandas live in China, Nepal, India, and Myanmar, formerly Burma.

The two animals look different. Giant Panda look likes bear and they can stand on their hind legs. They have white, chubby bodies with black legs and a black band across the shoulders. They have white faces with black patches around the eyes and black ears. They have short tails.

Red Pandas look likes racoons. They have long, soft fur and bushy tails with rings. A dark reddish streak comes down from each eye.

Both kind of Pandas eat bamboo. Red Panda may eat some fruits and berries as well as bamboo. Pandas have an "extra thumbs" that grows from the wrist of each front paw. They use their extra thumb to help them holding the bamboo.

Very few Pandas are left in the wild today. In China, people cut down bamboo forests for wood and to clear land for farming, so Giant Pandas have less food to eat. To protect the Pandas, the Chinese government has made it against the law to cut down bamboo in certain forests.

Mata Pelajaran : 1. Bahasa Inggris (31 s.d. 60)
Pilihlah jawaban yang benar pada soal dibawah ini !

Read the text carefully and then answer the questions based on the text.

The following text is for question 31 to 34.

The Grasshopper and the Ants

A Grasshopper spent the summer singing and dancing in the sun. One day he saw an ant hurrying by. She looked very tired and hot. "Why are you working on such a lovely day?" asked the grasshopper. "I'm collecting food for the winter," said the ant, and went on her way. She joined all the other ants carrying food to their store. The grasshopper sang another song and carried on dancing.

When the winter came and there was snow on the ground, the grasshopper had nothing to eat. He was very hungry, so he went and asked the ants to give him some food. "We worked all summer to collect our food. What did you do?" said one of the ants. "I was busy singing and dancing," replied the grasshopper. "Well, if you sing and dance all summer and do no work," said the ant, then you must starve in the winter."

31. Why did the ants work all summer? Because
- They couldn't sing and dance like the Grasshopper
 - They didn't know how to sing and dance
 - They collected food for winter
 - They were very diligent
32. What is the main idea of the second paragraph?
- The grasshopper likes to sing and dance
 - The grasshopper had nothing to eat in winter
 - The grasshopper was busy dancing and singing
 - The grasshopper must starve in winter
35. What is the main idea of paragraph 2 ?
- The description of Red Pandas
 - The description of Giant Pandas
 - The Pandas eat bamboo
 - The kinds of Pandas.
36. These are the descriptions of Red Panda, except
- They look like racoons
 - They have long soft fur
 - They have bushy tails with rings
 - They can stand on their hind legs.
37. What do the Pandas use their extra thumb for?
- To stand on their hind legs.
 - To help them holding the bamboo
 - To cut down the bamboo
 - To eat some fruit and berries.

38. ... and Myanmar, formerly Burma. (paragraph 1).
The underlined word is closest in meaning with
....
A. previously
B. prevaillingly
C. prevalently
D. predicably

39. Which of the following statements is not in the text?
A. Both kinds of pandas eat bamboo.
B. Giant Pandas have white, chubby bodies.
C. Both Pandas are exactly the same.
D. Giant Pandas live in China.

The following text is for questions number 40 and 41

SCHOOL TRIP TO SANUR BEACH

On 28th of August, there will be a school trip to Sanur Beach.
Departure : 07.30 a.m.
Programs : Swimming, games, volley ball, and lunch at the Sea View Restaurant.

Afternoon : walk along the beach to the lagoon and watch the boat festival.
Fee : Rp 50.000,-

Contact Person: Dian

Chairperson

Rizal

40. What is the announcement about?
A. A lagoon at the Sanur Beach
B. A Sea View Restaurant
C. Sanur Beach
D. A schedule of a school trip
41. This announcement is mostly addressed to ... of a school.
A. visitors
B. tourists
C. students
D. travelers

The following notice is for questions number 42 and 43

**FRAGILE
EQUIPMENT
DO NOT TOUCH**

42. Such kind of caution can usually be found on
A. A door
B. A certain product
C. A gate of a zoo
D. Furniture

43. What does the word 'fragile' in the text above mean?
A. Easily broken
B. Carefully handled
C. Gradually changed
D. Completely used

This text is for question number 44 to 47

Ingredients

4 red potatoes
1 tablespoon olive oil
1 onion, chopped
1 green bell pepper, seeded and chopped
2 tablespoons olive oil
1 teaspoon salt
3/4 teaspoon paprika
1/4 teaspoon ground black pepper
1/4 cup chopped fresh parsley

Equipment

Large skillet
Plate
Pot

Method

- (1) Bring a large pot of salted water to a boil. Add potatoes and cook until tender but still firm, about 15 minutes.
- (2) Drain the potatoes and cut them into 1/2 inch cubes when they are already cool.
- (3) In a large skillet, heat 1 tablespoon olive oil over medium high heat. Add onion and green pepper. Cook about 5 minutes stirring often, until soft. Transfer to a plate and set aside.
- (4) Pour remaining 2 tablespoons of oil into the skillet and turn heat to medium-high.
- (5) Add potato cubes, salt, paprika and black pepper. Cook, stirring occasionally, until potatoes are browned about 10 minutes.
- (6) Stir in the onions, green peppers and parsley and cook for another minute. Serve hot.

44. The text tells you about
A. The potatoes and their use.
B. How to make fried potatoes.
C. Boiling potatoes in good ways.
D. Someone's experience in cooking.
45. Which sentence is wrong according to the text?
A. It takes 45 minutes to cook the food well.
B. You need 3 kinds of equipment to cook the meal.
C. You are supposed to serve the meal when it is hot.
D. The potatoes must be cut after they are getting cool.
46. "Transfer to a plate and set aside."
The word "transfer" in the sentence nearly means
A. Bring.
B. Move.
C. Drain.
D. Take.

47. "Drain the potatoes and cut ... when **they are** already cool."

What does the word "**they**" in the sentence refer to?

- A. The potatoes.
- B. The cubes.
- C. The utensils.
- D. The ingredients.

The following text is for question 48 to 51

The Monarch Hotel

Swim and splash in the sea. Have fun with boat rowing. Go for walks on the clean beaches. Enjoy free breakfast on the first day of your stay. You can also use the swimming pool and gym facilities located within our resort.

Enjoy your stay in Monarch Hotel with all the facilities:

- 1. Overlook the beach
- 2. 100 bedrooms, most with private bathroom
- 3. Central heating and air conditioning throughout
- 4. 2 lifts to all floors
- 5. Nights porter
- 6. Nightly entertainment, etc.

Charges per Night – Bed and Breakfast

Single room	Rp. 100.000
Single room with bath.....	Rp. 150.000
Double room.....	Rp. 250.000
Double room with bath.....	Rp. 300.000

48. What is the purpose of the text above?
- A. to advertise a hotel
 - B. To entertain readers
 - C. To persuade the readers
 - D. To help the hotel
49. Which of the following statements is true according to the brochure above?
- A. 100 bedrooms have private bathrooms
 - B. It is far from the beach
 - C. The guests get free breakfast on the first day
 - D. The swimming pool is outside the resort
50. If you stay in Monarch hotel for three nights in a double room, how much do you have to pay?
- A. seventy five thousands rupiah
 - B. Seven hundreds rupiah
 - C. Seven hundred and fifty thousands rupiah
 - D. five thousands rupiah
51. These are the activities you can do in the resort of Monarch hotel, except
- A. Go for a walk on the beach
 - B. Boat rowing
 - C. Go surfing in the sea
 - D. Use the swimming pool
52. What happened to Leonardo da Vinci in 1470s?
- A. His father sent him to the workshop of a famous artist.
 - B. He loved to invent new machine, to draw fantasy castles, etc.
 - C. He was hired by Ludovico Sforza, the duke of Milan.
 - D. He learned the skill of painting.
53. "He loved to invent new machines ..." (second paragraph).
What does the word invent mean?
- A. Look for
 - B. Use
 - C. Create
 - D. Think about
54. What is the main idea of the last paragraph?
- A. Leonardo da Vinci's father sent him to a workshop.
 - B. Leonardo da Vinci loved to paint castle and machines.
 - C. Leonardo da Vinci inventions were not known for centuries.
 - D. Leonardo da Vinci was a genius.
55. From the text we can conclude that
- A. Leonardo da Vinci worked for a duke of Milan.
 - B. People of his time did not really know him.
 - C. Leonardo da Vinci was actually an all-around genius.
 - D. The most of his inventions were unknown for centuries.

The following text is for question 52 to 55.

Leonardo da Vinci was an all-round genius, adept at either designing a new drill or painting a portrait of the Madonna. He was justly famous for his versatility.

He was born in the tiny village of Vinci, near Florence Italy. When a boy he was very alert and enjoyed sketching the world around him. His father sent him to the workshop of a famous artist, where Leonardo learned the skills of painting. But he knew no contentment in painting by itself. He loved to invent new machines, to draw fantasy castles, and to sketch human body.

In the 1470s he was hired by Ludovico Sforza, the duke of Milan, as an adviser. While working for the duke, Leonardo continued creating: new weapons, new tools, new buildings. The Most of these inventions were drawn in his private notebooks and never saw the light of day until centuries after his death. The people of his time only knew him as a great artist; they did not realize the fullness of his genius.

The following questions are not related with the text above!

56. Dina : Look! It's raining again.
Danny : Oh no, not again. It ... all day yesterday too.
A. raining
B. rains
C. rained
D. rain
57. I ... him two days ago, but I don't know where he ... now.
A. See, is
B. Saw, is
C. Seeing, is
D. Seen, was
58. Jane was very nervous as the plane took off because she
A. had flown before never
B. had flown never before
C. had before never flown
D. had never flown before

For no. 59 and 60: complete the conversation with the correct words available below!

- Gerry : " Hi, Dika! Long time no see! How 's everything with you?
Dika : "I'm good, what about you? It's been a long time since the last time we met."
Gerry : " I'm just fine. It's a pity you live so far away. I wish you live (29)"
Dika : " By the way, you look (30) ... Have you lost your weight?
Gerry : " Yes, I lost 5 kg in a month, I'm on diet.
59. A. farther
B. further
C. nearer
D. nearest
60. A. stronger
B. wider
C. fatter
D. thinner

Selamat Mengerjakan

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